FEBRUARY, 1959 • 35¢

AMERICAN

Cinematographer

SERVING ALL FIELDS OF MOTION PICTURE PRODUCTION

The Magazine of Motion Picture Photography



- New Super-Widescreen System
- Photographing "The Hanging Tree"
- Animating Dialog For Cartoons
- New Technique For TV Commercials



Fast action, undersea location. This blow-up of a scene from Ivan Tors' production, "Underwater Warrior," shows how DuPont "Superior" 4 can give you good action shots in any light. Mr. Tors, shown at right ready to dive, always accompanies his actors, directors and crew when filming underwater.

"Shooting 'SEA HUNT' we need the exceptional speed of 'Superior' 4"

says Ivan Tors, **producer of the TV series, "SEA HUNT," for ZIV Television Programs, Inc., and "Underwater Warrior," released by MGM.**

"These pictures wouldn't have been possible without DuPont 'Superior' 4," states Mr. Tors. "Its high speed and wide latitude make it ideal for underwater sequences. With 'Superior' 4 in the camera, we know that anything we see with our own eyes the camera can see better."

And Mr. Tors *does* see it with his own eyes. Whenever he shoots underwater, he and his secretary, both expert divers, go down with the director, lighting men and actor-divers. He's right on the spot and knows from firsthand experience the problems that can come up in submarine cinematography.

"Talk about tough locations—most of them are child's play when compared to the bottom of the sea," he says. "The light's strange, you have to use special cameras that are pretty tricky and, if your shot's not right the first time, re-shooting can be awfully expensive. You've got to have a film you can depend on—that's why I always use DuPont 'Superior' 4."

For more information about DuPont Superior® 4 Motion Picture Film and other fine negative and positive films, contact the nearest Sales Office or write DuPont Photo Products Department, 2432-A Nemours Building, Wilmington 98, Delaware. In Canada: DuPont of Canada Limited, Toronto.

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Better Things for Better Living . . . *through Chemistry*

You've been clamoring for it . . .
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PRO JUNIOR* DEAL

that saves you $40

Here's what you get: **Regular Price**

PRO JUNIOR TRIPOD	**$150.00**
PRO JUNIOR CARRYING CASE	**18.00**
PRO JUNIOR HI-HAT (*low-mount*)	**22.00**
Total Cost	**$190.00**

YOU PAY ONLY $150.00

Deal Expires March 30th 1959

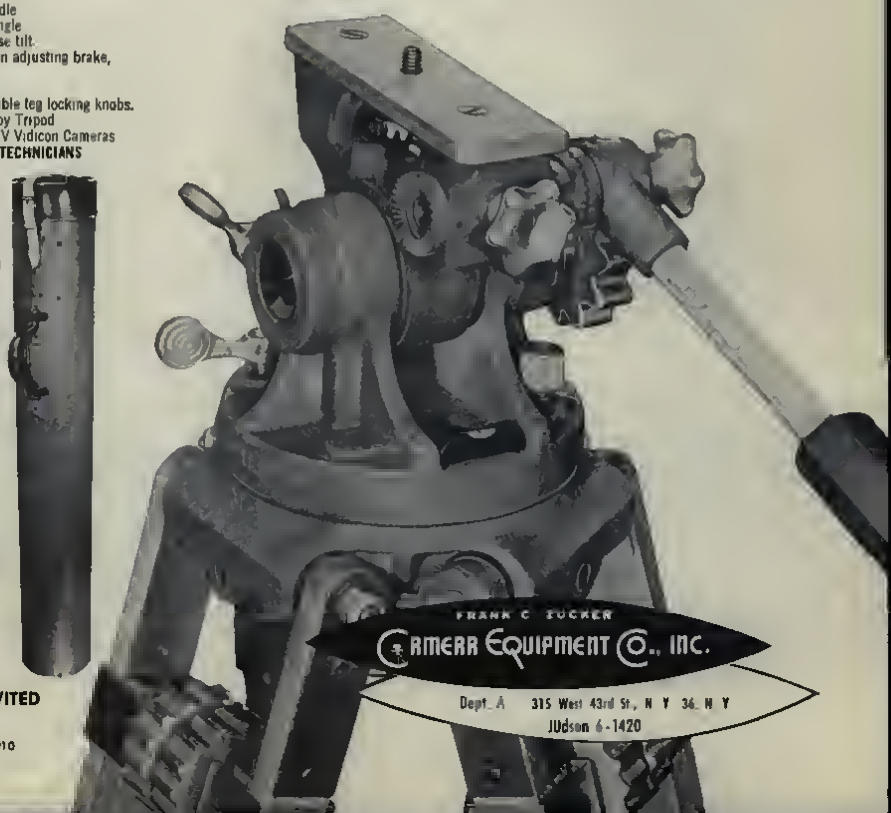
The most imitated—but never duplicated professional Tripod

We made our first spectacular PRO JUNIOR offer as our bit to help the country climb out of the doldrums. Now we are repeating it to accede to the wishes of hundreds of cameramen who delayed so long that the opportunity slipped out of their fingers. When, if ever, this deal is repeated is problematic.

Imagine—world-famous PRO JUNIOR Tripod, the professional cameraman's standby for decades and the nation's no. 1 best seller—at such remarkable savings. Naturally, this offer is for a limited time—after which prices return to normal. No fooling. You *know* that what we advertise we *do*. So hurry to avoid disappointment.

These are some of the PRO JUNIOR features:

- Simplified camera attaching method
- Adjusting telescoping pan handle with EXCLUSIVE adjustable angle
- Sockets for left, right or reverse tilt
- EXCLUSIVE special pan tension adjusting brake, independent of pan lock
- Cast in tie-down eyelets
- EXCLUSIVE self-adjusting double leg locking knobs.
- Head mounts on Hi Hat or Baby Tripod
- Ideal for Motion Picture and TV Vidicon Cameras
- **MADE IN U S A BY SKILLED TECHNICIANS**



Professional Jr. Tripod Carrying Case



CECO Professional Jr. Hi-Hat

DEALER INQUIRIES INVITED

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CAMERA EQUIPMENT CO., INC.
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AMERICAN
Cinematographer

February, 1959 • Vol. 40, No. 2

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•

ON THE COVER

CAMERA SET-UP for a night rain scene for Warner Brothers' "The F.B.I. Story" starring James Stewart and Vera Miles. Under the plioflm canopy erected over the camera stands screen director Mervyn LeRoy (left) and director of photography Joseph Biroc, ASC. A single sprinkler extended above the plioflm-protected camera provides the necessary artificial rain for the scene.

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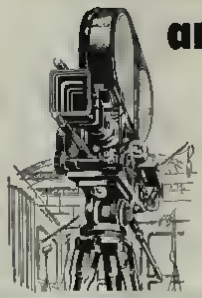
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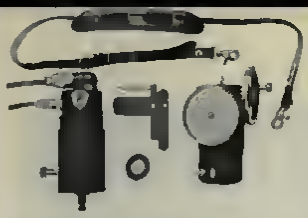
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Mitchell Professional Accessories extend 16mm and 35mm camera use



No other camera today films with trouble-free *professional perfection* such a wide range of requirements. A Mitchell, equipped with specially designed professional Mitchell accessories, has virtually unlimited ability and versatility of use.

Among many accessories available for 16 mm and 35 mm Mitchell Cameras



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FOLLOW FOCUS ATTACHMENT



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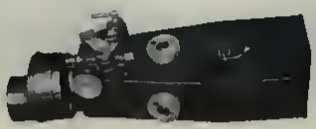
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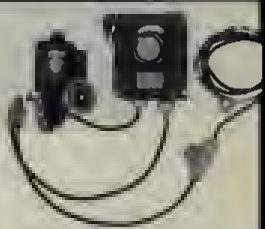
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Creative organizations that are cost conscious naturally turn to Ansco's *Anscochrome® Professional Camera Film Type 242* for all work where the ultimate in color quality is desired. That's because only Type 242 produces low-contrast master reels having the finest possible color rendition and print-through characteristics.

For rich reds, accurate flesh tones and soft, clean gradation nothing compares with *Anscochrome Professional Camera Film Type 242.*

And for flexibility that literally does the photographers bidding with a minimum of trial-and-error, use NEW Ansco Type 243 for the best in release prints. Keep production costs where they belong, switch to Anscochrome Professional Camera Film Type 242! Ansco, Binghamton, N. Y. A Division of General Aniline & Film Corporation.

Ansco

Type 242

EXPOSE

EXPOSING FACTS ABOUT CALVIN CO. SERVICES

VOL I KANSAS CITY. MO. NO. 2



16MM FIRST GENERATION COLOR PRINTING

Kodachrome prints from original Kodachrome still make the best 16mm color prints in several ways. (Prints from inter-negatives are becoming quite good.)

For those desiring the best, The Calvin Company is equipped to make one or a thousand prints from the original, with little chance of damage to the original.

In 1943, The Calvin Company developed and built a oustom printer, known now in the trade as the Multimatic Printer.

These are high speed production printers made especially to handle Kodachrome originals safely, and to give an almost unlimited number of uniform color prints, with the least amount of danger to the

(OVER)

World's Largest 16mm Service Organization

THE CALVIN CO.—1105 TRUMAN ROAD—KANSAS CITY 6. MO.

original. These printers have proved themselves over the years and they have an extremely good record for not damaging originals.

Some of the features of this printer are:

1. Runs in both directions so that the originals never have to be removed.

2. Runs at 72 ft. per minute.

3. Handles 1,200 ft. originals and raw stock.

4. Makes optical effects by the matte method so they are alike in all prints.

5. Makes light changes by the matte method so that all the print is made at a constant color temperature for the lamp. Also, all light changes are made on the exact frame—no lag in changing.

6. Printer operated in electrostatically cleaned air conditioned rooms at controlled humidity conditions.

7. A & B rolls and sound are all printed in one operation.

If you are looking for a large quantity of Kodachrome (5269) release prints from your 16mm color show, no one can furnish these any better than The Calvin Company.

To keep this equipment busy we naturally need your orders too! Why not send us your next service or printing order—16mm color or black and white—by any method? Contact us. If you are in a hurry, telephone HArrison 1-1234.

Sincerely yours,

Lloyd Thompson
Executive Vice President

Industry NEWS

A series of advertisements placed by Kling Photo Corporation in leading business publications such as Business Week will dramatize the fact that motion pictures can be industry's most effective communications tool.

The advertisements will give the results of a survey recently conducted among the nation's non-theatrical film producers, including in-plant motion picture departments, which queried film producers on their use of Arriflex 16mm and 35mm motion picture cameras and asked for a list of recent productions filmed with Arriflex cameras.

The results of this survey are contained in an 8-page report in this issue, prepared by Kling Photo Corporation. Reprints will be sent readers of the various business papers responding to the forthcoming series of Kling advertisements.

To film makers everywhere, the Kling survey reveals the tremendous popularity of Arriflex cameras, and their increasing use in every field of non-theatrical motion picture production.

• • •

The Corney-Smith ultra-widescreen development reported in this issue coincides with the announcement that Cinerama, Inc., now has nearing perfection a new single-camera and single-projector system for Cinerama pictures that will give the same depth and sense of participation effect of the triple-camera-projector system it has used heretofore. When and if perfected, the development will make it possible to show Cinerama ultra-widescreen pictures in a greater number of theatres and in cities never before reached by Cinerama productions.

That ultra-widescreen pictures are of definite interest to many of the nation's exhibitors was emphasized last month when George Kerasotes, president of Theatre Owners of America, in an address before an exhibitor's gathering, said that one of the industry's greatest needs is a 35mm process, wall-to-wall, ceiling-to-stage presentation that would be adaptable to all theatres at reasonable cost. He noted that Cinerama, Cinemiracle, and Todd-AO represent important technological advances but are not adaptable for all theatres.

Continued on Page 136

PRECISION SOUND READERS

your guarantee of the finest in sound editing equipment



OPTICAL-MAGNETIC

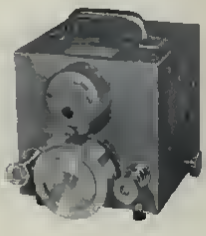
Model 800, 16mm 35mm and ¼" tape NET PRICE $259.50

FEATURES: Simple threading; SMPTE Standard machined film rollers with oilless bearings; precision ground shafts; polished stabilizer drum with needle bearings (surface cannot damage film) Sound track is read by placing it towards the face of the instrument and reading from left to right (May also be read from right to left)

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The ultimate in a precision optical track reader! Compact 6"x 6"x8½" in size; 117-v 60 cyc. AC amplifier, 4-watt output; heavy-duty Alnico V speaker; safety fused; prefocused socket; pilot light; 6-ft. heavy duty cord



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Ideal for all magnetically-recorded mediums Same precision engineered features as above models Reads sound tracks in either direction A dependable aid to precise cutting and editing

Prices F.O.B. Factory, Brooklyn, N. Y.

Look for this trademark

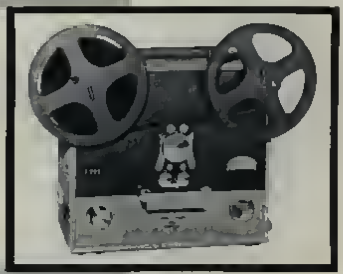
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THE NEW PORTMAN ANIMATION STAND

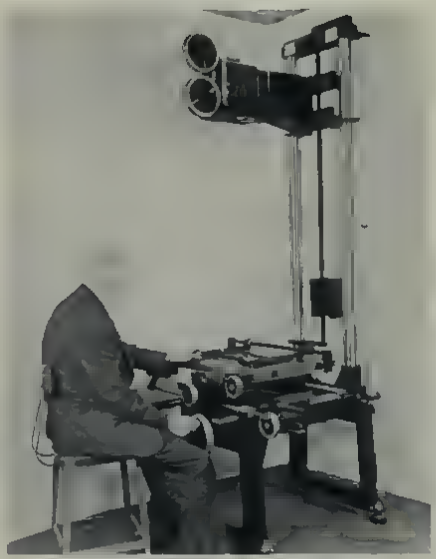
Here is the all-new Portman Animation Stand with specially designed features and accessories for complete and versatile animation and special effects operation.

There are more than 40 new accessories to help you achieve the desired effects easily and economically. The Portman Animation Stand features new design concepts not found on any other animation stands now available.

A rugged, dependable, precision piece of equipment at a price you wouldn't believe possible. The Portman stand is the biggest, best buy in animation stands today! See it on display at Florman & Babb or send for free catalog and complete information.

Basic Stand with 50" Zoom $1495

Bosic Compound with table-top, 2 peg tracks, rotory movement, counter, hand crank and platen $1790



Feature	Portman	Stand X	Stand Y	
Camera carriage travel	50 or 62	38½	60	
Compound Movement North/South	19	9	18	
Compound Movement East/West	26	11	24	
Camera carriage ball bearing mounted	Yes	Yes	Yes	
Compound Movements ride on ball bearings	Yes	Partly	No	
One piece cast iron bed	Yes	No	No	
Handwheel control for zoom	Yes-2 Speed	No-single speed motor	Yes	
360° Rotation	On compound	On compound	On compound	
Peg Track Movement	26	18	16	
Table Top size	22 x 32	21 x 27	18 x 24	
Camera carriage column construction	Two 3" dia.	Two 2-5/8" dia.	one-3½" dia. one-2" dia.	
Can crawl fittes pass between columns	Yes	Yes	No	
Fields covered in one continous zoom	1 to 26	3 to 13½	2 to 24	
Compound moves on ground steel (rail tubes)	Yes	No	Yes	
Zoom counter and scale	Yes	Yes	counter only	
All counters read facing operator	Yes	Yes	No	
All controls within reach of sitting operator	Yes	Yes	No	
All cast construction through-out	Yes	No	No	
Hole thru table top to floor for projection	Yes	Yes	No	
Free spinning handwheel knobs	Yes	No	Yes	
Camera carriage drive	Ball bearing lead screw	⅜" dia. threaded rod	Chain	
Camera carriage counter-weighted	Yes	No	Partly	
Adjustable leveling feet	Yes	Yes	Yes	
Price of stand and compound with shadowboard pantograph & under lts.	$3,570	50" Zoom $3,770 62" Zoom	$3,950	$3,925

COMPARE THE NEW PORTMAN STAND FEATURE BY FEATURE WITH COMPETITIVE EQUIPMENT

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GRID



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It is especially designed for use in the motion picture, TV and professional photography field where instant direct reading and great accuracy is a prime requirement. The ultra sensitive SPECTRA professional exposure meter comes complete with disk, grid, 16 film-speed slides and carrying case . . . $97.50

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HOLLYWOOD 38, CALIFORNIA
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New York 21 New York

WHAT'S NEW

in equipment, accessaries, services



FREQUENCY CHANGER. Carter Change-A Cycle requires no transformer. The AC input is rectified to DC, then fed to special converter having a 60 or 50 cycle output. Works on any input frequency. Output capacities range from 40 to 2000 watts AC. Available for single or 3 phase input. Rectifier and related components are housed in crackle finish metal case. Carter Motor Co., 2757 A George St., Chicago 18, Ill.

EKTACHROME COMMERCIAL PROCESSING. Colour Film Services, Ltd., 22/25 Portman Close, Baker St., London, W1, England announce completion of facilities for the processing of Ektachrome color film for film makers in British Isles and the Continent. Company's process has been approved by the Research Laboratory of Kodak, Ltd., England, according to R. G. F. Chase, Director of the company.

ANSCOCHROME-EKTACHROME PROCESSOR. New Filmline Model ACC 8 affords automatic daylight operation, continuous processing of 16mm Anscochrome reversal at 480 ft. per hour, or Ektachrome at 1,380 ft. per hour. Features variable speeds, speed indicator, overdrive film transport, automatic refrigeration control. Unit is 11½ ft. long, 55 in. high, width 40 in. Price is $12,700. Filmline Corporation, Milford, Conn.



MAGNETIC FILM AND TAPE READER. A two unit portable reader for use with silent picture viewers for editing and syncing sound films. No moving parts in reader unit. Tape or film is moved back and forth in track of reading head, which is positioned directly in line with picture viewer's film path. Versatile amplifier and speaker unit doubles as portable carrying case. List price is $169.50. Brochure available. McMurry Audio Electronics, Inc., 9740 Washington Blvd., Culver City, Calif.

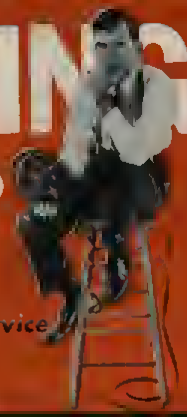


FORTY-INCH TELEPHOTO MOUNT. A mount and cradle for adapting the Cyclotar 40" f/8.0 lens to Hulcher rapid-sequence data-recording cameras is announced by Gordon Enterprises, 5362 No. Cahuenga Blvd., North Hollywood, Calif. Special features are a center-of-gravity balanced cradle with ⅜" tripod insert, and a reflective white enamel finish to provide temperature compensations when equipment is used in direct sunlight. Also available are sun-hood extensions and specially-mounted filters. Spec sheet available.

16MM FILM VIEWER. Features 3-element lens which produces greater picture definition in film blowup on viewers' 3¼" x 4¼" hooded

Continued on Page 80

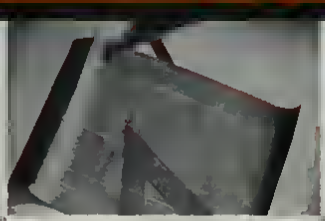
PLANNING A LAB?

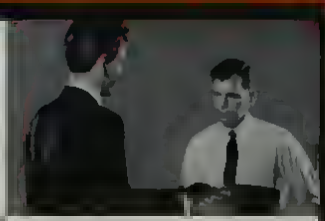


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own color lab is at
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equipment to a compl
laboratory system



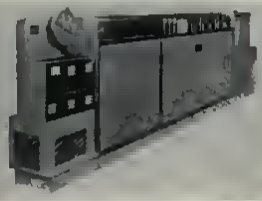


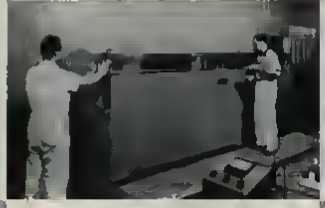


1 ANALYSIS OF YOUR NEEDS. The first step in planning your lab is to determine your present and future needs. After a thorough analysis, Houston Fearless engineers can plan objectively.

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3 PROPOSAL. Based on many years experience, Houston Fearless will submit a specific proposal, recommending a complete system for your lab — whatever is best for your requirements.







4 PROCESSORS. Houston Fearless builds the widest range of processing equipment; 16mm, 35mm, 70mm, B&W, color, pos., neg., rev., spray-type, from 5 to 250 fpm or will custom design for your needs.

5 INSTALLATION. Complete installation service is available. Performed by experts who know the equipment intimately and who thoroughly check it out and test-operate it for perfect performance.

6 PERSONNEL TRAINING. If required, Houston Fearless will train your technicians in the best operating and maintenance procedures—important for achieving maximum lab efficiency.

SERVICE AFTER SALE Houston Fearless maintains a nationwide service organization.

HOUSTON FEARLESS



*In Burbank, California, Houston Fearless operates the Houston Color Film Laboratory where finest quality processing is done for the major motion picture studios as well as 16mm producers.

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AURICONS
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Cable
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Strong ARC-Trouper
10 Amps 110V AC 5000W
2000W 750W
CECO Cine lites
(shadowless lite)
Gator Clip lites
Barn Doors
Diffusers
Dimmers
Reflectors

ZOOMAR 35mm

EDITING

Moviolas • Rewinders
Tables • Splicers
Viewers (CECO)

GRIP EQUIPMENT
Parallels • ladders
2 Steps • Apple Boxes
Scrims • Flags
Gobo Stands
Complete grip equipment

SOUND EQUIPMENT
Magnasync-magnetic film
Revere Magicorder
Mole Richardson Booms and
Perambulators

Portable Mike Booms
Portable Power Supplies to
operate camera and recorder

WE SHIP VIA AIR, RAIL OR TRUCK

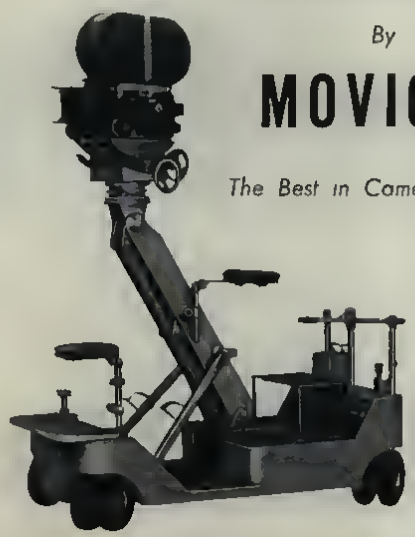
FRANK C. ZUCKER
CAMERA EQUIPMENT CO., INC.
Dept. A 315 West 43rd Street,
New York 36, N. Y. JUdson 6-1420

CRAB DOLLY

By

MOVIOLA

The Best in Camera Mobility

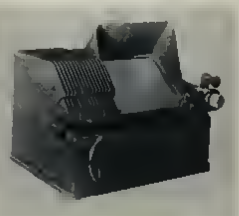


MOVIOLA MANUFACTURING CO.
1451 N. GORDON STREET • HOLLYWOOD 28, CALIFORNIA • HO 7-3178
Cable Address: MOVIOLA HOLLYWOOD • CALIFORNIA

WHAT'S NEW

Continued from Page 78

screen. Innovation is frame counter which affords precise timing or counting of frames for close editing or for time and motion analysis. Other features include automatic switch by which the 75 watt projection lamp



is turned on and off by action of film through gate, focusing and framing controls, and built in frame marker. List price is $92.00. Victor Animatograph Corp., Div. of Kalart Company, Inc., Plainville, Conn.

FILM PRINTER SHUTTER Affords faster printing speeds, 22 standard light settings, plus zero light to permit checkerboarding. Major parts are of magnesium or aluminum. No sliding parts; all motion is ball bearing supported. Entire mechanism prepositioned



by servo motor. Maximum pre set time, 400 milliseconds, permits printing speeds up to 150 fpm.

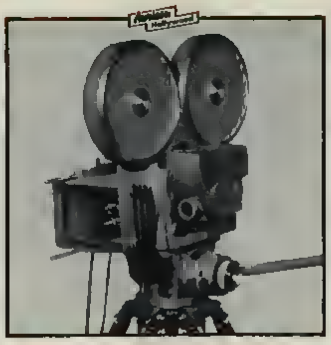
Shutter may be controlled by punched tape or automatic board system. Tape system uses standard 1" 8-hole paper tape with the Bell & Howell color additive system code. Electronic Systems, Inc., 5433 West Diversey, Chicago, Ill.

AIR SQUEEGEE A precision tool for removing excess solution from 16mm and 35mm film surfaces during processing. Low-pressure operation provides a cushion of air support for film as it passes between rollers. Emulsion never touches rollers under normal use. Adjustable gap permits splices to pass freely. Adaptable to any processing machine. For 16mm, $55.00; for 16mm/35mm, $68.00. Filmline Corporation, Milford, Conn. ■

AURICON 16mm Sound-On-Film for Professional Results!



"CINE-VOICE II" 16 mm Optical Sound-On-Film Camera. ★ 100 ft. film capacity for 2¾ minutes of recording, 6 Volt DC Convertor or 115 Volt AC operation. ★ $795.00 (and up).



"AUDICON PRO-600" 16mm Optical Sound-On-Film Camera. ★ 600 ft. film capacity for 16½ minutes of recording. ★ $1871.00 (and up) with 30 day money-back guarantee.



"SUPER 1200" 16 mm Optical Sound-On-Film Camera. ★ 1200 ft. film capacity for 33 minutes of recording ★ $5667.00 (and up) complete for "High-Fidelity" Talking Pictures.



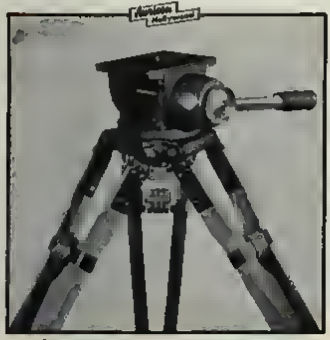
SOUND RECORDER — Model RM-30 . . . 1200 foot film capacity, synchronous motor for "double-system" 16mm Optical Sound-On-Film operation. ★ $3630.55 (and up)



PORTABLE POWER SUPPLY UNIT — Model PS-21 — Silent in operation, furnishes 115 Volt AC power to drive "Single System" or "Double System" Auricon Equipment from 12 Volt Storage Battery, for remote "location" filming. ★ $269.50



FILMAGNETIC — Finger points to Magnetic pre-stripe on unexposed film for recording lip-synchronized magnetic sound with your picture. Can be used with all Auricon Cameras. ★ $870.00 (and up)



TRIPOD — Models FT-10 and FT-10S12, Pan-Tilt Head Professional Tripod for velvet-smooth action. Perfectly counter balanced to prevent Camera "dumping." ★ $406.25 (and up).

Strictly for Profit

CHOOSE AURICON

If it's profit you're after in the production of 16 mm Sound-On-Film Talking Pictures, Auricon Cameras provide ideal working tools for shooting profitable Television Newsreels, film commercials, inserts, and local candid-camera programming. Now you can get Lip-Synchronized Optical or Magnetic Sound WITH your picture using Auricon 16 mm Sound-On-Film Cameras. Precision designed and built to "take it."

Strictly for Profit—Choose Auricon!

BERNDT-BACH, INC.

6902 ROMAINE ST., HOLLYWOOD 38, CALIF.

Auricon Hollywood



Auricon Equipment is sold with a 30-day money-back guarantee You must be satisfied.

Please send me free Auricon Catalog. 6008A

Name

(Please write your address in margin)

MANUFACTURERS OF SOUND-ON-FILM RECORDING EQUIPMENT SINCE 1931

THIS MONTH'S
CECO SPECIALS

35mm. WALL CAMERAS
Complete with Complete Sound Outfit Includes Modulite Galvanometer, Amplifiers, 2 magazines, 4 lenses—35mm Variable Area
SPECIAL PRICE: $2,500.00
also
35mm WALL CAMERA
without sound Complete with 12 volt motor, 4 lenses, 2 magazines
PRICED AT $1,200.00

35mm PRECISION
Editing Machine
Formerly sold for $3,800.00
NOW ONLY $1,200.00
Features include electrometer drives with stepless variable gear; true optical system of a 12 surface rotating prism; foot pedal for reversing direction at any speed Continuous process makes it safe for originals and fine grain masters Like New

16mm BERNDT MAURER
Single System Camera—complete with sound equipment $2,500.00
This slightly used camera features precision made direct through-the-lens focusing and a brilliant image viewfinder The entire unit includes galvanometer, amplifier, three lenses, two 400' magazines and carrying cases

USED Model 2709 Bell & Howell Camera with Unit I Shuttle and 120° Shutter.
Excellent for use in animation.
Specially priced at $2,000

Camera Equipment Co is an Authorized Bell & Howell Sales and Repair Agency for Bell & Howell Professional Cameras Printers, Spliicers, and Model 2709 Standard Cameras

FRANK C ZUCKER
CAMERA EQUIPMENT CO., INC.
Dept 315 West 43rd St.,
New York 36, N. Y JUdson 6-1420

PHOTOGRAPHIC ASSIGNMENTS

WHAT THE INDUSTRY'S CAMERAMEN WERE SHOOTING LAST MONTH

ASTERISKS INDICATE TELEVISION FILMS

ALLIED ARTISTS

WINTON HOCH, ASC, "The Big Circus" (CScope & Technicolor, Saratoga Prods.) with Victor Mature and Rhonda Fleming. Joseph Newmen, director.

AMERICAN NATIONAL

CURT FETTERS, "Tombstone Territory"* (Ziv TV) with Pat Conway.

JACK MARQUETTE, "Sea Hunt"* (Ziv-TV) with Lloyd Bridges. Leon Benson, director

ROGER SHEAGMAN, JACK MARQUETTE, MONROE ASKINS, "Rough Riders"* (Ziv-TV) with Kent Taylor.

BOB HOFFMAN, "Lock Up"* (Ziv TV) with MacDonald Carey. Robert Florey, director, "Tender Foot"* (Ziv TV; pilot) Monty Pittman, director.

RICHARD RAWLINGS, JACK MARQUETTE, BOB HOFFMAN, "MacKenzie's Raiders"* (Ziv-TV) with Richard Carlson.

CHARLES VAN ENGER, ASC, BOB HOFFMAN, RICHARD RAWLINGS, "Bat Masterson"* (Ziv TV) with Gene Barry.

STANLEY HORSLEY, ASC, "World of Giants"* (Ziv-TV) Jerry Juren, director.

EDWARD CRONJAGER, ASC, "Missile"* (Ziv-TV) with Dane Clark; Commercials* (Ziv-TV).

RICHARD RAWLINGS, "Highway Patrol"* (Ziv-TV) with Broderick Crawford Jack Herzberg, director.

CALIFORNIA STUDIOS

STANLEY HORSLEY, ASC, Commercials* (Roland Reed Prods.)

VERNON LEWIS, "Ship Design for Tomorrow"* (Roland Reed Prods., color, throughout U S) Arthur Pearson, director

STUART THOMPSON, ASC, "Have Gun Will Travel"* (Filmaster Prods.) with Richard Boone.

FLEET SOUTHCOTT, "Gunsmoke"* (Filmaster Prods.) with James Arness and Dennis Weaver.

CASCADE PICTURES

ELWOOD BRADELL, ASC, Commercials*

ROY SEAWRIGHT, Commercials*

COLUMBIA

JOSEPH BRUN, ASC, "Middle of the Night" (Shooting in N Y.) with Kim Novak and Fredric March, Delbert Mann, director.

FRED JACKMAN Jr., "Alcoa-Goodyear Theatre"* (Screen Gems) Joseph Graham, director.

BURNETT GUFFEY, ASC, "They Came to Cordura" (CScope & Color, Goetz Prods.) shooting in Utah) with Gary Cooper and Rita Hayworth. Robert Rossen, director.

JOHN WILCOX, "The Mouse That Roared" (Highroad Prod., shooting in England) with Jean Seberg and Peter Sellers Jack Arnold, director

JAMES WONG HOWE, ASC, "The Last Angry Man" (Fred Kohlmer Prod., shooting in N Y.) with Paul Muni and Betsy Palmer Daniel Mann, director.

ERNIE DAY, "Idle on Parade" (CScope, Warwick Prod., shooting in London) with William Bendix and Anne Aubrey. John Gilling, director

FRED GATELY, ASC, "Father Knows Best"* (Screen Gems) with Robert Young and Jane Wyett Peter Tewksbury, director

GENT ANDERSON, ASC, "Donna Reed Show"* (Screen Gems) with Donna Reed Oscar Rudolph, director

IRVING LIPPMAN, "Behind Closed Doors"* (Screen Gems), John Peyser, director.

JACK ETRA, "Stake Out"* (Screen Gems shooting in Fla.) Bernard Kowalski, director

FRANK CARSON, "Secret Bride of Candy Rock" with Lou Costello and Dorothy Provine, Sidney Miller, director.

J. BURGI CONTNER, ASC, "Naked City"* (shooting in N Y.)

WALT DISNEY

GORDON AVIL, ASC, "Zorro"* with Guy Williams.

FILMCRAFT STUDIOS

VIRGIL MILLER, ASC, "You Bet Your Life"* with Groucho Marx Robert Dwan director

FOX WESTERN AVENUE

FRANK REDMAN, ASC, "The Perry Mason Show"* with Raymond Burr.

GEORGE DISKANT, ASC, CHARLES BURKE "Dick Powell's Zane Grey Theatre"* (Four Star Prods.) with Dick Powell

GEORGE DISKANT, ASC, "The Rifleman"* (Four Star Prods.) with Chuck Connors.

GUY ROE, ASC, "Wanted Dead or Alive"* (Four Star Prods.) with Steve McQueen. "Trackdown"* (Four Star Prods.) with Robert Culp

JOSEPH BIROC, ASC, "Richard Diamond"* (Four Star Prods.) with David Janssen Commercials*

KARL STRUSS, ASC, Commercials* (Four Star Prods.)

Continued on Page 132

KLING PHOTO CORPORATION
257 FOURTH AVENUE, NEW YORK 10, N.Y. • 7303 MELROSE AVENUE, LOS ANGELES 46, CALIF.



A Tribute to Our Customers

In recent years the ARRIFLEX has become the most succeasful professional motion picture camera. Its many superior features and outstanding advantages which contributed to ita succeas have been enumerated in a series of advertisements, published over the years in the trade magazines.

Every camera is only a tool, a means to an end, the end being the picture it is to make. To produce a picture of optimum quality, with the least amount of effort, in the shortest possible time and at the lowest cost -- that is the task in which the ARRIFLEX distinguishes itself in the opinion of people who are best able to judge: the ARRIFLEX usera.

In some of our previous advertiaements we have already featured many of our customers who use and love the ARRIFLEX. They were selected from a long list of well-known firms, institutions and governmental agencies. Now, we are paying a special tribute to another very important group of ARRIFLEX usera: the film producers. The fact that so many of them have chosen the ARRIFLEX for so many of their auccessful productions is incontrovertible proof that the ARRIFLEX has become the most important camera in the field.

We thank the producers listed for providing us with the information for these pages. It is our intention to publish a aimilar list next year and for many more years to come. Therefore, would those of our customers who did not answer our questionnaire on time, or who are not on our list, please write to us, ao that we may be sure to include them in our next series?

The engineering and production ataff of the ARRIFLEX factory join us in saluting these and all our other cuatomers and thank them for the confidence placed in our equipment. All of us pledge to continue our best efforta to keep the ARRIFLEX what it has been acclaimed to be: the moat desirable and auccessful tool for the motion picture industry.

KLING PHOTO CORPORATION

Paul Klingenstein

Paul Klingenstein
President

Producer	Productions Filmed with ARRIFLEX	Sponsor
NEW ENGLAND		
BOSTON UNIVERSITY PHOTO SERVICE **Boston, Mass.**	*Rehabilitation Program *All University Affairs	Boston Junior League Boston University
CAMPBELL FILMS **Saxtons River, Vt.**	Your Job with Grand Union Jimmy Golden The Spelman Story Beneath The Elms Half A Thousand Years The Perkins Story The Right Instruction of Youth The Dartmouth College Case 1958 Profile of a University	Grand Union Food Stores Grand Union Stores Spelman Coll., Atlanta, Georgia Trinity Coll , Hartford, Connecticut Moravian Coll., Bethlehem Perkins School For Blind, Watertown, Massachussetts Wagner College Dartmouth College Univ. of New Hampshire
CINE-VIDEO PROD. **Milford, Conn.**	The Greatest of These People Helping People Where There's a Will	Red Feather Drive Red Cross Univ of Connecticut
DOUGLAS PROD **Meriden, Conn.**	The Magic Charm of Austria's Wonderland The Fabulous Mystery of Modern Turkey The Charm of Sweden The City of Bremen Russia Today Mexico	Lufthansa German Airlines Lufthansa German Airlines Swedish Natl Tour Office Bremen, Germany Castle Films Castle Films
MAONA FILM PROD. **Watertown, Mass.**	Child Alone Xmas Scenes in Boston	Mass Assoc for Retarded Children Warner Bros
ROLAR STUDIO **Sandy Hook, Conn**	Harnessing the Housatonic The Golden Key	The Connecticut Light & Power Co Nell Dorr Prod
SLEEPING GIANT FILMS **Hamden, Conn.**	Midnight Ride of Paul Revere The Physical Universe Museum Man A Governor's Day From These Ashes Outdoor Adventure Club	Encyclopedia Britannica Films Independent Prod Independent Prod Randall Co R.C. Diocese, Hartford Independent Prod
SWEETMAN PROD **Bethel, Conn.**	Prof. Vacuum Cleaner Salesmanship	General Electric Co
WESTON WOODS STUDIOS **Weston, Conn.**	Lentil The Camel Who Took a Walk The Five Chinese Brothers Curious George Rides A Bike	Weston Woods, Inc Weston Woods, Inc Weston Woods, Inc Weston Woods, Inc
ROY WILCOX PROD. **Meriden, Conn.**	Exploring the Farmland	Roy Wilcox Prod
MIDDLE ATLANTIC		
AMERICAN FILM PRODUCTIONS **New York, N.Y.**	Minesweeping Explosive Cutters IFR Enroute & Terminal Procedures Progresso TV Comm'ls Bulova TV Commercials	U.S Navy U.S Navy Carle Vinti Adv McCann Erickson, Inc
ANIMATED PROD. **New York, N.Y.**	*Roosevelt Raceway *Dipsey Doodles *Cheese Doodles *Manhattan Shirts	Heinaman, Kleinfeld, Shaw & Joseph, Inc Richard K Mahoff Richard K Mahoff Pack Advertising
ATSION PROD **New York, N.Y.**	Clowning Around	Atsion Productions
JOHN BRANSBY PROD. **New York, N.Y.**	The St Lawrence Power Project *Partially Arriflex	Power Authority of the State of New York

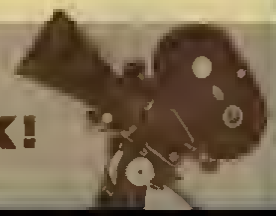
Producer	Productions Filmed with ARRIFLEX	Sponsor
BRAY STUDIOS, INC. **New York, N.Y.**	11 Training Films 2 Eastman Color Three 16mm Color Five 15 minute Color	U.S Navy U.S Air Force Sprague Gas Meter Bray Studios
BUEHLER BROS **Allentown, Pa.**	Dedication Investigation on the Shear Strength of Prestressed Concrete Beams Amsler Equipment	Lutheran Brotherhood Lehigh University Carl Hirschmann
JOHN CHRISTIAN PRODUCTIONS **New York, N.Y.**	The Pattern for Peace	U.S Information Agcy
CRAVEN FILM CORP **New York, N.Y.**	Asian Artists in Crystal TV Commercials for:	U.S Information Agcy Westinghouse, U.S Steel, General Mills, Hestle, Procter & Gamble, Carter Prod
DEMRY PROD. INC **New York, N.Y.** **DE FRENES COMPANY** **Philadelphia, Pa.**	Invisible Avenger The Shadow (TV) Cummings City C-130 Interim Aerial Delivery Service Officer Candidate School Grinding Wheels and Their Applications Mast Progress Through Quality Achievement Safety at the Crossroads The Story of Acrylic Paints	Republic Pictures Independent Prod. Army Pictorial Center U.S Air Force U.S. Navy Simonds Abrasive Co Wm Schluderberg-T.J.U Kurdle Co Reading Railroad Co Rohm & Haas Co
EDITORIAL FILMS **New York, N.Y.**	Tale of Two Counters Careless Cash	McCalls Magazine American Express Co.
CHARLES ELMS PROD **New York, N.Y.**	Mr. Dopey O'Doodle and Dacro P3R The Heat Engine Aluminum Screens Beauty Bath Oil, Lavender Mist, Sachet Spray	Crown Cork & Seal Co Shell Oil Columbia Mills Andre Richard Co
WALTER ENOEL PROD **New York, N.Y.**	Thirty Films — One Received Golden Reel Festival Award	
FARRELL & OAOE FILMS **New York, N.Y.**	Handling Ships, Boats and Cargo Maintenance of Steam Catapults Blasting Vibrations New Era in Plastics Multicolor Magic Half Second Butyrate Lacquer Impact The Amflow Process Natural Gas for Appalachian Markets	U.S. Navy U.S Navy Hercules Powder Co Hercules Powder Co. Hercules Powder Co Eastman Chem Products Panhandle Eastern Pipe Amar Mach & Fdry N.Y State Natural Gas
FILM GRAPHICS INC **New York, N.Y.**	Mining for Nickel and Nickel Refining Aircraft Rivets Submarine Films	International Nickel duPont daNemours U S Navy
THE FILM SELL **New York, N.Y.**	Modern Crusaders Human Tumor Chemotherapy Studies in Eggs	Passionist Fathers Sloan-Kettering
FORDEL FILMS, INC. **New York, N.Y.**	Anesthesiology	E R Squibb & Sons
FORMA ART **New York, N.Y.**	Man and Car	Forma Art
WM. J GANZ CO **New York, N.Y.**	Friend of a Friend	Gaines Dog Research
GERALD PRODUCTIONS **New York, N.Y.**	The Ordeal of Thomas Moor A World Alone Hans Brinker	Smith-Kline & French Smith-Kline & French N.B.C
COURTNEY HAFELA **New York, N.Y.**	Mambo Madness Rock Rock Rock Run Across the River Love and Jazz	Universal-International Dist Corp. of America Cameo Productions Ravan Films Corp



America's Most Successful

Producer	Productions Filmed with ARRIFLEX	Sponsor
PAUL NANCE PROD New York, N Y	*The Nature of Glass* *Report Films* *Report Films*	Corning Glass Works Bell Lab (U.S A F) Bell Lab (U.S Army)
HARTLEY PROD INC New York, N.Y.	*Progress Report 1956* *Man From Missouri* *Wings to Hawaii* *In Every Man's Heart* *Lets Have a Luau* *Pattern of Safety* *Cooking Can Be Fun*	I B M Asbestos Cement Pan American World Airways Pan American World Airways Container Corp Monsanto Chemical Corning Glass Works
LEO TRACHTENBERG-HARVEST FILMS New York, N Y.	*For All the Children* *Science Fights Tooth Decay* *A Fair Chance for Tommy*	Herald-Tribune Fund U.S. Government Nat'l Soc for Prev of Blindness
INSTITUTE OF VISUAL TRAINING New York, N Y	*Friend of a Friend*	Guides Dog Research
INTERNATIONAL FILM FOUNDATION New York, N Y.	*Japan*	Self Produced
HERBERT KERKOW INC. New York, N.Y.	*Progress Report #3, #4* *Prototype Progress Report*	Bell Tel Lab Inc Bell Tel Lab Inc
VICTOR KAYFETZ PRODUCTIONS New York, N Y	*Angled Deck Carrier*	U.S Navy
KLAEGER FILM PROD New York, N Y.	*TV Commercials for*	U S Rubber (Fletcher D Richards Inc) General Motors, Pontiac (MacManus John & Adams)
KNICKERBOCKER PRODUCTIONS New York, N.Y.	*Your Share in Tomorrow* *Sociology* *The Norad Story* *Fuel Element Story*	N Y Stock Exchange McGrow-Hill Book Co U.S. Air Force U.S Information Agcy
ROBT LAWRENCE PRODUCTIONS New York, N.Y.	*Koppers* *Spic and Span* *King's Beer* *Smith Brothers* *Cities Service* *Prudential*	Van Sant Dugdale, Inc Young & Rubicam Inc Vickers & Benson Ltd Caster, Farrell, Hilton & Chesley Ellington & Co , Inc Raach McClinton, Inc
LEIGH PHOTOGRAPHS Trenton, N.J	*Thermoid Brake Service* *Vacation Afloat*	Thermoid Co Independent Prod.
ARTHUR LODGE PROD New York, N Y	*Industry on Parade*	Nat'l Assoc of Mfrs
LORD & TANN, INC Troy, N.Y	*Saratoga Feature Races* *Weighing While Conveying* *Two Weeks with Pay*	Saratoga Raceway Cashin, Inc (Albany Division Tobin Packing) 98th Inf Div Arty USAR
JAMES LOVE PROD New York, N.Y.	*Here Next Door* *Needle in the Sky (Materials -- Key to Progress)*	Civil Air Patrol Civil Air Patrol U.S. Air Force
LYBAROER PROD New York, N Y.	*A Case for the Future* *You Save Time and Money with a Davidson* *Provan Guides* *Toys* *Voice of Amer Series*	Case Inst. of Tech The Davidson Corp Marts & Lundy, Inc Wershaw-Gould Inc
MARATHON TV NEWS New York, N.Y.	*Crashing the Water Barrier* *Challenge on the Lake* *This Way Up* *Five Miles West* *A Report from Budd* *Over 100 Newsfilms for*	Socony-Mobil Oil Socony Mobil Oil Sikorsky Aircraft Volkswagen, GmbH Budd Company IBM, American Airlines, Socony-Mobil Oil, Trans-World Airlines, General Dynamics.

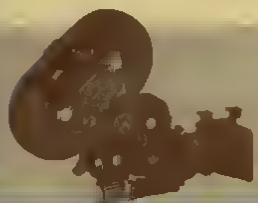
Producer	Productions Filmed with ARRIFLEX	Sponsor
DONALD S. MC CHESNEY Ithaca, N.Y.	*The Birds of Kenya* *The Turkana Country* *Preparation of Bird Skin*	Self Produced Self Produced Self Produced
MICHENER & O'CONNOR Harrisburg, Penn.	*Man to Know, Rep Hugh Scott* *TV Spot*	Rapub State Com Penn Bankers Assoc
MODE ART PICTURES Pittsburgh, Pa	*Recently Purchased No Picture Credits*	
M.P.O PRODUCTIONS New York, N.Y.	*Equation for Progress* *Ford Stylist* *The Return* *A Mile to Eldoredo* *The Big Train* *New Shade of Green* *Design for Dreaming* *The Good Seed, Horse, Calf and Egg* *The Man in the Doorway* *Fibers in Civilization* *Hound Dog* *Petrified River*	Ford Motor Co Amer. Physical Therapy Reynolds Metals N Y Central R R U.S Air Force General Meters Corp Eli Lilly American Cyanamid Chemstrand Corp Remington Arms Union Carbide
MULLER, JORDAN & HERRICK New York, N.Y.	*More Time for Spelling* *The U S Indus Park* *The Atom comes to Town*	McGrow-Hill Socony Mobil Oil Nati U.S Chamber Comm.
OWEN MURPHY PRODUCTIONS New York, N.Y.	*Notre Dame Story* *This Is New Jersey* *Shotgun Handling* *Word Is Spreading* *4 Spring Dealer Films* *Private Line Service*	Univ of Notre Dame N.J. Bell Telephone Co Field & Stream Firestone Tire & Rubber Firestone Tire & Rubber Amer Tel & Tel Co
NEWSFILM, U.S.A. New York, N Y.	*Deadline 53 Minutes*	United Cerebral Palsy
PATHESCOPE CO OF AMERICA New York, N Y	*High Places of the Mind, Small Town U.S.A., Challenge of the Atom, Sanctuary* *Share a Proud Tradition* *Sword & Shield, The Intelligence Cycle, Intelligence & You* *Better Business Bureau Story* *To Serve the Living*	U.S. Information Agcy U.S. Marines U.S. Navy Assoc of Better Business Bureaus Better Business Bureau & Natl Assoc of Funeral Directors
JOHN PATRICK Saffern, N.Y.	*My Kid Twenty*	Self Produced
PENNEBAKER FILMS New York, N.Y.	*Brussels Film Loops*	U S State Dept
PHOTO ARTS PROD Philadelphia, Pa	*Color Tuned* *Public Service* *Esslinger* *Sight Series* *Greystone Wines* *Torture Tests* *Felton Sibley* *Wish you Were Here* *Judy Lee* *Services to Youth* *Case of Protection* *Speedomex*	Bestwell Certain Teed WRCV TV J C Cox Agcy Wills Eye Hosp Bauer & Tripp Sandura J C Cox Agcy Boy Scouts of America Downs Carpets City of Philadelphia Bestwell Certain Teed Leeds & Northrup
DAVID PIEL, INC New York, N.Y.	*Jaymar Ruby Slacks TV Commercial* *Puritan Shirts TV Comm.*	Ehrlich, Neuwirth & Sobo, Inc Ehrlich, Neuwirth & Sobo, Inc.
ROY PINNEY PROD New York, N.Y.	*Secrets of Nature*	Photo & Film Library
Q.E.D PRODUCTIONS New York, N.Y.	*Fashions in Paris* *Benny Goodman In Brussels* *Vespa In N.Y.* *This Is Aviance*	International Latex Studio 1, Westinghouse Vespa, Corp, Columbian Airlines, S.A



Producers Choose ARRIFLEX!

Producer	Productions Filmed with ARRIFLEX	Sponsor
ROST YARNELL RICNIR	*Areas of Promise*	Dresser Industries
New York, N Y.	*Pipeline of Progress*	Amer La Pipeline Co
	Research in Steel	U.S Steel
STEPNEN SNARF PROD.	*Mallah*	World ORT
New York, N Y.	*Elrahus House*	World ORT
	Decision	National Educ TV
WARRRN R. SMITH	*Metals, Mills & Men*	Pittsburgh Steel
Pittsburgh, Pa.	*Molecules Mean Money*	Koppers Co
	Light On Plant	Koppers Co
	Plus a Little Bit More	Pittsburgh Steel
	John Kane Hospital	WQED-TV
SOUND MASTERS, INC	*Speechless by Misteke*	Amer Tel & Tel Co
New York, N Y.	*Floor Show*	Amer Tel & Tel Co
	Assignment Venezuela	Creole Petroleum
	Freight by Flexi-Van	N Y. Central R R
	Challenge of the Future	Sun Oil Co.
	Calling All Ducks	Olin Mathieson
	Medical Defense Against Chem Warfare	U.S Navy
	African Holiday	Olin Mathieson
	British Safari	McLouth Steel
	On the Green	U.S Golf Assoc
STUDIO SIXTEEN	*The Tenth Challenge*	United Fndn of Detroit
Reading, Pa.	*Time Out for Jimmy*	United Fund of Greater Lima, Ohio
	Was it Rain	United Fund of Berks County
	The Story of U	Self Produced
BILL STURM STUDIOS	*Boston Herald Traveler*	James T Chirurg
Nme York, N Y.	*Herald Emercal Pages*	James T Chirurg
	Sunday Herald TV Sec	James T Chirurg
	Travaler Women's Pages	James T Chirurg
	Martin L. Hall Co, Victor Coffee (Liva)	James T Chirurg
TELIC, INC	*The Merch of Science*	New Hollend Machine
New York, N Y	*Secret of Systems*	New Hollend Machine
	Who Cares About the Weather	New Hollend Machine
	A Story for the Editor	New Holland Machine
	Counter Revolution	Armstrong Cork Co
	1957 Convention	Armstrong Cork Co.
	House of the Future	Armstrong Cork Co
	Gyro-Pm Ship Stabilizer	Sperry-Gyroscope Co
TRANSFILM INC.	*U S Steel TV Commercial*	B B D O
New York, N.Y.		
TRIDENT FILMS INC	*14 Leap Films for U S*	Office of U.S Comm
New York, N.Y.	*Pavillion at Brussels*	to the Brussels Fair
	Symphony Across the Land	U.S Information Agcy
TRI-I FILMS INC.	*The Checkered Flag*	Kendall Oil Refining
New York, N Y.		
VAVIN, INC.	*France For Fun, series*	French Gov Tour Off
New York, N.Y	*Innocents Abroad*	Am Soc of Travel Ags
	Montici Intersre	Piazza Montici
	Party at the Potters	French Wine Comm
	5 films on Morocco	Moroccan Govt
	Various Shorts in series	Reader's Digest, Life, Sports Illustrated
ROGER WADE PROD.	*Washington, Shrine of American Petroleum*	Baltimore & Ohio R R
New York, N Y.	*Song of the Iron Road*	Assoc Rr's, N.Y
	Shipboard Cargo Gear Handling	U.S Navy
	Grid Navigation	U.S Air Force
ACR WILLIAMS TEMBO PRODUCTIONS	*African Holiday*	Mutual Buying Corp
New York, N Y.	*10,000,000 Miles*	Reyon Instituta
	Torture Testers	Arrow Shirts
	The Tire That Conquered Africa	AVISCO
	Nicober Jones	TV Release
	Bwana Willy	TV Release
WONDSEL, CARLISLE & DUNPNY	*Eye-Witness Report*	Sun Oil Co
New York, N.Y.	*The Nme U S Royal Master*	U.S Rubber Co
	Jak-Et Pak 50	Continental Can Co

Producer	Productions Filmed with ARRIFLEX	Sponsor
SOUTH ATLANTIC		
FEATURE STORY FILMS	*Forward March*	C.G Conn Band Inst
Clermont, Fla	*Playland of the Seeway*	Alexandria Bay, N Y Chamber of Commerce
FLORIDA FILM PROD	*Wild Women of Wonga*	Tropical Pictures, Inc.
Coral Gables, Fla.	*Mr Withers Stops The Clock*	Paul Alley Productions
	Crashing The Water Barrier	Marathon TV (Socony-Mobil Oil)
	Chevy Dinah Shore Show	Van Praag Production
	Ford Motor Co Show	Van Praag Production
	Pabst Blue Ribbon Beer Commercials	Van Praag Production
	L Welk Commercials	Van Praag Production
	Climax Commercials	Van Praag Production
	The Official Orange Bowl Annual Film	Orange Bowl Com
	Champs of the Alcan Run	Van Praag Production
PAUL R ILYINSKY	*An American Tradition*	U S Natl. Guard Assoc
Palm Beach, Fla	*Great Moments of the Dance*	Mr. Frank Hale and Imperial Dancers
MONUMENTAL FILMS	*The Magic Switch*	Black & Decker Mfg
Baltimore, Md	*The Magic Cylinder*	Coastal Foods
	Keep Maryland Beautiful	State of Maryland
	Strikes and Spares	W & Doner Co
	TV Commercials for:	Natl. Brewing Co., Baltimore Fed Sav & Loan, Koester Baking Co.
SCOPE, INC	*TV Commercials for*	Delta Air Lines, Texaco Copeland Sausage, Regal Beer, Carons Beer, Seaview Indus & Vezol
Coral Gables, Fla.		
SHAMROCK STUDIOS	*Denise Darcel Spots*	Brown Associates
Winter Park, Fla	*Field of Corn Spots*	Fleischman's Margarine
	Television Girls	Color Conversion Corp
	Jenny and The Chimp	Cole Enterprises
	Getaway to the Moon	Hal Carrington
SOUNDAC PROD	*A Dozen and One Numerous TV Film Commercials*	Royster Fertilizer
Miami, Fla		
WASHINGTON VIDEO PRODUCTIONS, INC	*Heart of a Stranger*	Christian Children's Fund Inc
Washington, D.C.		
FRANK WILLARD PRODUCTIONS	*Direct Distance Dialing Trailer*	Southern Bell Tel Co
Atlanta, Ga		
NORTH CENTRAL		
ATLAS FILM CORP	*Gunnery & Tactics in The F100A*	U.S Air Force
Oak Park, Ill	*Air to Ground Gunnery*	U.S Air Force
	Air to Air Gunnery	U.S Air Force
RUSSELL R BENSON PRODUCTIONS	*That They May Have Life*	Riley Memorial Fdn
Indianapolis, Ind	*Crossroads*	Crossroads Rehabilitation Center
	Toward the Summit	Denison University
	At Denison	Denison University
	A Place To Go	United Fund of Greater Indianapolis
	The Silver Dollar Story	Grinnell College
	In the Culver Tradition	Culver Military Academy
	On The Edge of History	Western College for Women
	Surgical Technique of Chamopallidectomy	Dr C Basil Fausset, neuro-surgeon, Indianapolis
THE CALVIN CO	*Co-Ral*	Chemagro Corp.
Kansas City, Mo	*Your Finest Hour*	United Fund
	Merlex	Phillips Petroleum



America's Most Successful

Producer	Productions Filmed with ARRIFLEX	Sponsor
THE CALVIN CO. **Kansas City, Mo** *(Continued)*	*Adams Ranch* *In the Middle* *The Grapevine* *Processing Nuclear Reactor Fuels & Wastes* *The Perennial Guest*	*Phillips Petroleum* *University Films* *University Films* *Union Carbide* *Dow Chemical Co*
CAVALCADE PROD INC **Lake Zurich, Ill**	*The Greatest Gift* *Exploring God's Wonders*	*New Vision Foundation* *Scripture Press*
CENTRON CORP. INC. **Lawrence, Kansas**	*Transportation By Water* *Contract Maintenance*	*McGraw Hill Book Co.* *U.S. Air Force*
CHRISTENSEN-KENNSDY PRODUCTIONS **Omaha, Neb.**	*Our Rig issue*	*Omaha Development Council*
CINEFONICS INC. **Morton Grove, Ill**	*Cook Calling* *First From Space* *Guys and Dials* *A New Look at instruments*	*Cook Electric Co* *Army Ballistic Missile* *Air Research & Dev.* *Air Research & Dev*
COLMES-WERRENRATN PRODUCTIONS, INC **Chicago, IR.**	*Starting With Sears* *Muscles of Control* *Non-Root Fallier Feeding of Plants* *TV Commercials for*	*Sears, Roebuck & Co* *Fisher Governor Co* *Atomic Energy Comm* *Norge Washer & Dryer*
JONN COLBURN ASSOCIATION, INC **Wilmette, Ill**	*Ski Tricks* *Windows to the Future* *Powder to Plane* *Great Story of Corn* *1960 World Premiere* *The Magic Circle* *The Third Assembly* *Tomorrow is Now* *Grain Car Unloader*	*Evinrude Motors* *Continental Can Co* *Aeroquip Corporation* *Funk Bros Seed Co.* *J.I. Case Co.* *Johnson Motors* *Lutheran World Fed.* *Minneapolis-Moline Co.* *Link Belt Co*
COMMERCIAL FILM COMPANY **Western Springs, Ill**	*Polo, the World's Fastest Game*	*Oak Brook Polo Club*
CONDOR FILMS, INC **St. Louis, Mo.**	**IBM Newsreel* *TV Commercials for*	*Film Counselors, Inc.* *Remington Rand*
CORONET INSTRUCTIONAL NLMS **Chicago, Ill**	*The French Revolution* *Napoleonic Era* *Brahms and His Music* *Boy of Renaissance Italy* *Liszt and His Music* *Leonardo Da Vinci* *Simple Plants, Bacteria* *Midnight Ride of Paul Revere* *Mother Goose Rhymes* *The Sea: Background for Literature* *The Wide Wide Sea* *Colonial Family of New France* *U S Expansion: Texas* *U S Expansion. Oregon* *Boy of a Frontier Fort* *Gold Rush Days* *Christmas on Grandfather's Farm* *The Vikings and Their Explorations* *Edgar Allan Poe* *The War of 1812* *Launching the New Government* *Amer. Literature. The Westward Movement*	*Coronet Instruc. Films* *Coronet Instruc. Films* *Coronet Instruc. Films* *Coronet Instruc. Films* *Coronet Instruc. Films* *Coronet Instruc. Films* *Coronet Instruc. Films* *Coronet Instruc. Films* *Coronet Instruc. Films* *Coronet Instruc. Films* *Coronet Instruc. Films* *Coronet Instruc. Films* *Coronet Instruc. Films* *Coronet Instruc. Films* *Coronet Instruc. Films* *Coronet Instruc. Films* *Coronet Instruc. Films* *Coronet Instruc. Films* *Coronet Instruc. Films* *Coronet Instruc. Films*
THOMAS COUNTRYMAN FILM PROD. & CONTINSNTAL FILMS **Minneapolis, Minn.**	*Report From Spain* *Operation Man High* *The Human Side* *Instant Electric Copying* *Bright Warning* *It's Easy to Bend* *Investing in Your Future* *Choosing Games for Children*	*N B C.* *C.B.S. Conquest TV* *Minn. Dept of Welfare* *Minn. Mining & Mfg* *Minn. Mining & Mfg.* *O'Neil Irwin Mfg.* *Dunwoody Industrial Institute* *American Family Inf. Forum*

Producer	Productions Filmed with ARRIFLEX	Sponsor
CUMMINS PROD. **Chicago, IR**	*San Francisco* *Job Safety*	*Chicago Motor Club* *U.S. Post Office*
WILLIAM E DSNEEN **Washington Wands, Michigan**	*The Touch of His Hand* *Threshold of Terror* *The Heart of a Man* *The Little Ones* *Thailand, Land of Rice* *This Land Australia* *Indonesia, People of The Islands* *Manual of the Philippines* *Operation Giant*	*The Pontifical Inst for Missins Exten* *The Pontifical Inst for Mission Exten* *The Pontifical Inst for Mission Exten* *The Pontifical Inst for Mission Exten* *The Udylite Corp* *The Udylite Corp* *The Udylite Corp* *The Udylite Corp.* *The Udylite Corp.*
EMPIRS PHOTOSOUND INC. **Minneapolis, Minn**	*Glacier Natl Park* *Empire on Parade* *Out of the Earth* *Man Sometimes Conquers* *Sales Secret* *Phosphate, The Living Mineral* *A Promise* *TV Commercials* *TV Commercials*	*Great Northern Railway* *Great Northern Railway* *Intl. Minerals & Chem* *St. Paul Jr. League & Natl Hemophilia Fdn* *Franklin Mfg. Co* *Intl. Minerals & Chem Corp., Phosphate Div* *Farmers Unine, Central Exchange* *Farmers Union, Central Exchange* *Great Northern Railway*
IRVIN W. LA RUS INC. **Chicago, IR.**	*Transposition of the Great Vessels* *Care & Sterilization of Surgeons Gloves* *Machine Mimics Man* *Haminephro-Ureterectomy of a Double Kidney* *The Operating Microscope in Otologic Surgery* *An Operation for Cure of Vesicovaginal Fistula* *Fire and Explosion Hazards from Flammable Anesthetics*	*Deknatel* *Becton, Dickinson Co.* *Baxter Laboratory* *Dr. K.S Barber* *Dr. George Shambaugh* *Dr V.J O'Conor* *Abbott Laboratories*
SDWARD FEIL PROD. **Cleveland, Ohio**	*High Speed Roll Former* **With Heart to God and Hand to Man* *A College Meets a Challenge* *The Art & Beauty of Cashmere*	*The Cyril Bath Co* *Salvation Army of Greater Cleveland* *Fenn College* *Dalton of America*
FENTON MC NUGN PROD. **Evanston, Ill.**	*A Penny Saved* *Milprint Makes The Difference* *From Start to Finish* *Susan's Show*	*Credit Unine Natl Ass* *Milprint Div of Phillip Morris Inc* *Johnson's Wax* *CBS TV Network*
FILM ASSOC. OF MICH. **Detroit, Mich.**	**Twice for the Money* **Facts About Strofoam* **Workmen of Wheels*	*Dow Chemical* *Dow Chemical* *Massey Ferguson Tractors*
FILM ARTS PROD., INC. **Milwaukee 4, Wis.**	*Junior Chamber of Comm National Convention*	*Pepsi-Cola*
FILM PRODUCTIONS **Minneapolis, Minn**	*Challenge of Change* *June Pastures in January*	*Central Cooperative Cunningham Hay Conditioners*
GAMMA GROUP **Evanston, Ill.**	*Shikar (Indian Tiger Hunt)*	*Amer. Express Co*
GRAPHIC PICTURES **Chicago, IR**	*The K Log* *Production on the Farm* *Paper in the Making* *The Meadowdale Story* *How to Watch a Race* *The Story of Crude* *Time in Balance* **Partially Arriflex*	*Kellogg Switchboard and Supply Company* *Visking Corp.* *St Regis Paper Co* *L.W. Besinger & Assoc* *Meadowdale Intl Raceways* *Globe Oil & Refin* *Elgin Watch Co*



Producers Choose ARRIFLEX!

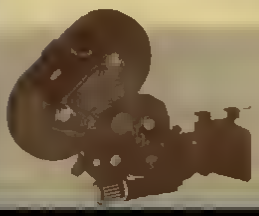
Producer	Productions Filmed with ARRIFLEX	Sponsor
THOMAS GREEN PROD.	*Camp Lincoln for Boys*	Fred Rogers
Elgin, Ill	*Camp Lake Hubert for Girls*	Fred Rogers
	Ireland! Delight and Dilemma	Bill Adams
HARVARD PROD INC	*The Bantam Method In Materials Handling*	Schield Bantam Co
Park Ridge, Ill.	*New Methods*	Modern Hydraulics, Inc.
	Now Hear this, Stenegate	C.S. Johnson Co
	The Word Is Acceptance	C.S. Johnson Co
	S.A. Newsreel	Stephens-Adamson Manufacturing
	Giant on the St Lawrence	C.S Johnson Co
	Industrial's 152	Industrial Filter & Pump Mfg Co
INDUSTRIAL MOTION PICTURES	*New Face for Casey*	Special Trans Comm of Ohio Railroad
Cleveland, Ohio	*Meme the Winning Contractor*	Euclid Div of G.M.C
	The Finishing Touch	Sprayon Products
	The Ween Flying Press	Ween Equip Corp
KELLY-ZAHRNDT-KELLY	*Safe Packing*	United Van Lines
St Louis, Mo.	*Points for Progress*	United Van Lines
KENOSHA PUBLIC MUSEUM	*Spain and Portugal*	Kenosha Museum
Kenosha, Wis.	*England*	Kenosha Museum
	Mexico	Kenosha Museum
KENT FILMS, INC	*Proclaim Liberty*	Amer. Sunday School
Dayton, Ohio	*The Professor*	Forward, Inc.
	Week End for Peggy	Gordon Productions
LEWIS & MARTIN FILMS	*The Story of the U.S Mail*	U.S. Post Office
Chicago, Ill.	*Sound for Survival*	DuKane Corp
	Electronic Counter measures	U.S Air Force
	Lift Safely	U S. Post Office
MIDWEST FILM STUDIOS	*Many — Some of the largest and smallest companies in the country.*	
Chicago, Ill.		
FRED A. NILES PROD.	*Brunswick Balke-Collender*	McCann-Erickson Inc.
Chicago, Ill.	*Corn Products Refineries*	C L. Miller Co.
	Lion Oil Co	Ridgway Adv
	Lions Intl	Lions Intl.
	Kellogg	Leo Burnett Co
	Intl Shoe Co	Krupnick & Assoc
PARAGON PICTURES	*True Facts*	Motor Wheel Corp
Evanston, Ill	*The Silent Enemy*	Rust Oleum Corp
	The Factual Fable	A-E Staley Mfg
	Rx Increasing Profits from Sausage & Curing	A E Staley Mfg
PRODUCERS FILM STUDIOS	*Food Storage*	U S Navy
Chicago, Ill	*Food Preparation*	U.S Navy
	Food Serving	U.S Navy
	Kaiser Curtain Wall	Kaiser Alum. & Chem
	Kaiser Dome	Kaiser Alum & Chem
	Seven Million Miles of White Power	Kaiser Alum & Chem
	Ravenswood	Young & Rubicam
REGAN FILM PROD	*Edsel In Action*	Edsel Ford Motor Co.
Detroit, Mich		
GEORGE RYAN FILMS	*Hot Breads Round*	Betty Crocker-Gen. Mills
Minneapolis, Minn.	*The Clock*	Adv. Agencies, Inc
	Misc TV Commercials	
SIGNAL FILMS	*To The Neighbors*	American Red Cross
Kansas City, Mo	*Farmer With a Future*	Consumers Coop
	Rip Family	Herald of Healing Childrens Home
BILL SNYDER FILMS	*North Dakota, The Changing Picture*	Greater North Dakota Association
Fargo, N.D	*Melroe Method*	Melroe Mfg. Co.
	The Davis Story	N D Republican Party
	The First Twenty	Grain Terminal Assoc
	Let's Go To The Village	Childrens Vill Assoc.

Producer	Productions Filmed with ARRIFLEX	Sponsor
TELECINE FILM STUDIOS	*Zoo Parade series*	NBC TV
Chicago, Ill	*World Safari series*	NBC TV
	Great Enterprises	Chicago Met YMCA
	Ideas and Film	Bell & Howell
	The House That Research Built	Universal Thermo-Panel
	Bill's Better Breakfast	Cereal Institute
	Chicago Youth Rally	Coca-Cola Co
	Cooking Magic	Consolidated Book Publications
TRESSEL STUDIO	*Cobalt 60 Reloading*	Atomic Energy Comm
Chicago, IR	*Thickness Gauging*	Atomic Energy Comm
	Outdoor Education	Cook County Forest Preserve
	Paper Troubles	Lithographic Tech Fdn
	Half Tones	Lithographic Tech Fdn
	Surface Plates	Lithographic Tech Fdn
	Deep Etch Plates	Lithographic Tech Fdn
	Handling Plates on the Press	Lithographic Tech Fdn
	The Sunny Rock	Lithographic Tech Fdn
	Atomic Primer	Univ of Chicago
	Edgar Allan Poe	Coronet Films
	Gas Laws	Coronet Films
	Conservation of Energy	Coronet Films
	Extra Dividends	Standard Gas Truck Co
UNITED FILM AND RECORDING	*Because Man Dream*	Jewish Fed. of Metro Chicago
Chicago, Ill	*As Ya Know*	Dept of Public Welfare
	Stranger In the Family	Dept of Public Welfare
	Quality House	Lathing Fdn. of Chicago
THE VEHARD ORGANIZATION	*4-H Here and There*	Funk Bros. Seed Co.
Peoria, Ill.	*Here & There with FFA*	New Idea Farm Equip
	Steel Wire In Agricul	Keystone Steel & Wire
	Steel Wire In Indus	Keystone Steel & Wire
	Something to Crow About	Sears- Roebuck Fdn
VERN WESBY ADVEN FILMS	*Gateway to Adventure*	Ft Frances Cham of Comm
Chicago, Ill	*McCook Firemen In Action*	McCook, Ill Fire Dept
	Alaskan Adventure	Self Produced
	Polar Bear Adventure	Self Produced
VIDEO FILMS	*TV Clips for*	Plymouth Div.
Detroit, Michigan	*Walk TV Show*	

SOUTH CENTRAL

CONTINENTAL FILM PROD.	*The Eighth Wonder*	Rock City Gardens
Chattanooga, Tenn	*Change of Pace*	Fontana Village Govt Services
	Full Measure	Westinghouse Electric
IDEAS ILLUSTRATED	*The Rus and Us*	Tex School Safety Assoc
Dallas, Texas	*The Answer*	Waco United Fund
	The Next Hundred Years	Louisiana State Univ
	A Better Way	Tyler Pipe & Foundry Co
	The Wizards of Oz	Medical Plastics Lab
	San Angelo Story	San Angelo Indus Inc
	Fort Worth Story	Southwestern Bell Tel
	Fuels for Arentine	Fish Engineering Corp
	Folksinger	Documentary Unspon sored
JAMIESON FILM CO	*City In The Sun*	Southwestern Bell Tel
Dallas, Texas	*The Third Crusader*	Chance Vaught Air craft
	Confession TV show	Confession, Inc
	Texas In Review	Humble Oil & Refining
	Various TV Spots	
KEITZ & HERNDON	*Dr Pepper*	Dr. Pepper Co
Dallas, Texas	*Theatre Trailers*	
	Lone Star Gas TV Series	Lone Star Gas Co
	Standard Oil Road Test	Standard Oil of Ind
KENT LANE FILMS	**That Word Progress*	General Electric Co
Louisville, Ky.	**The Eighth Lively Art*	General Electric Co

*Partially Arriflex



America's Most Successful

Producer	Productions Filmed with ARRIFLEX	Sponsor
LOPEZ FILM STUDIOS **Baton Rouge, La.**	*Union Tank Car Co. *Rosedown Plantation* *Boat Club of Baton Rouge*	Public Relations Board Chicago, Ill. Charles Haines, Luis, Amedes
SOUTNWEST FILM CORP. **Dallas, Texas**	*A Better Way* *Next Hundred Years* *Ft. Worth Story*	Tyler Pipe & Fndry La. State Univ Southwestern Bell Tel
VISION FILMS, INC. **New Orleans, La.**	*Tulane Portrait* *Offshore Sulphur Min* *Food and the River*	Tulane University Freeport Sulphur Co N.O. Chamber of Comm.
MOUNTAIN		
ALEXANDER FILM CO. **Colorado Springs, Col.**	*Light on Democracy* *Cool Clear Water* *The Wheel* *Theater commercials for* *TV commercials for*	Fed. Postal Emp. Assoc Ranney Water Methods National Cooperatives Pontiac, Motorola, Seven Up, Philco, Rambler, De Soto, Youngstown Kitchens, Willys Jeep Pontiac, Shamrock Oil & Gas, Union Pacific R.R., Motorola, Seven-Up, Philco, Youngstown Kitchens
DICK DURRANCE FILMS **Aspen, Colo.**	*Ski Time In Aspen* *Ski West* *Snowblast* *TV series, Bush Bavarian* *TV films (Ski & Kayak)* *Chilean Ski Footage*	Aspen Skiing Corp Theo. Hamm Brewing E.F. Taylor Mach. Co Anheuser Bush Brewing Bulova Watch Co Pan Am. World Airways.
WARREN GARST WILDLIFE ENTERPRISES **Ft. Collins, Colo.**	*Wild Animal Families* *Home Builders of the Plains*	Film. Assoc. of Calif. Encyclopedia Britannica Films
NUGHES SOUND FILMS **Denver, Colo**	*Five Lives* *Passing The Test* *Titan ICBM* *The Home Show* *The Barrier Between*	American Medical Soc Wynn Oil Co Martin-Ballistic Missile Div. U.S.A.F NBC U.S. Dept of Interior
RIPPEY, HENDERSON, BUCKNUM **Denver, Colo.**	*Colorado Carnations-* *The Flower of Everlasting Springtime* *Color Harmony for your Home* *Frontier Vacationland* *Idaho Legend* *One Mile Closer to Heaven* *How to Make Your Pine Poles last longer,* *The Wonder Wood* *Selling Big Aggie Land*	Colorado Flower Growers Assoc. Colorizer Associates Frontier Airlines Idaho First Natl. Bk. Mt. States Tel. Co Osmose Wood Preserving Co., Inc. WNAX-Cowles Broadcasting
SOUTHWEST FILM INDUSTRIES **Tempe, Arizona**	*Five Education Films* *Comm. unnamed-TV*	United World
PATRICK WELCH **Boise, Idaho**	*Giants at Little Valley* *Umereck-Plus*	Atlas Powder Co Idaho Portland Cement
WESTERN CINE PROD DIV. WESTERN CINE SERVICE INC. **Denver, Colo**	*Colorado Cares* *Grand Canyon Holiday* *Gold Carpet to Elegance* *So We May Breathe* *The Closed Loop* *Truce Hydraulic Digger*	Colo. State Health Dept American Airlines Continental Airlines Natl. Fdn. for Asthmatic Children At Tucson Glenn L. Martin Co. Truco- Denver
PACIFIC		
ALL SCOPE PICTURES **Hollywood, Calif.**	*Air Force Non-Destructive Testing* *Partially Arriflex	U. S. Air Force

Producer	Productions Filmed with ARRIFLEX	Sponsor
CARMEL INDUSTRIAL FILMS **Carmel, Calif**	*Seed to Salad* *Thinning Lettuce* *Harvesting* *Grading* *Packing*	Holme & Selfert Holme & Selfert Holme & Selfert Holme & Selfert Holme & Selfert
CHARLES CANILL & ASSOC. INC **Hollywood, Calif**	*Impact* *TV Commercials for*	Univ. of Calif. and American Motors General Petroleum, Socony Mobil Co., Plymouth, S. Calif. Plymouth Dealers, Vic Tanny Gyms
CATE & MC GLONE **Hollywood, Calif**	*Holiday In Hawaii* *Flight Plan '57 & '58* *Our Islands of Hawaii* *Working With Skydrol* *Company Manners* *Moment of Decision* *Going Places (1958 Mobilgas Economy Run)* *TV Spots for (series)*	United Air Lines United Air Lines Hawaiian Airlines Monsanto Chemical Union Pacific Monsanto Chemical General Petroleum United Air Lines
COPLEY PROD. **San Diego, Calif**	*The Copley Press* *R.O.P. Color* *City Room* *Classified - America's Market Place* *San Diego County*	The Copley Press The Copley Press The Copley Press The Copley Press The Copley Press
DUDLEY PICTURES CORP. **Beverly Hills, Calif.**	*Safari City* *Where All Roads Lead* *Travel Tips* *Lion Dancers* *Tracer Test* *Fabulous Land* *Timeless City*	Universal-Internat'l Universal-Internat'l Universal-Internat'l Universal-Internat'l Universal-Internat'l Universal-Internat'l Warner Bros
F.M. PRODUCTIONS **Los Angeles, Calif.**	*Tune From Catch to Can* *Kingdom of the Sea* *Danger is my Business*	Chicken of the Sea TV Series NBC TV Series
A.J. FRANZ & SONS **San Francisco, Calif.**	*Whale Hunt*	Self Produced
OZZIE GLOVER PROD **Hollywood, Calif**	*Gateway to the World* *Industrial Breakthru* *Party Line Problems* *Sea Wings* *Diodes* *On Learning to Drive Carefully* *Mexico City* *Navahoe Missile* *River of Controversy* *Port of L.A.*	L.A. Harbor Div Hughes Aircraft Pacific Tel. & Tel Lockheed Aircraft Rame-Wooldridge City Schools Bus System Western Airlines Thompson Products Colorado River L.A. Harbor Div.
HOLLYWOOD TRAVEL PRODUCTIONS **Sherman Oaks, Calif**	*Rogue Rhine* *A Bond is Born* *The Heavens Declare* *Harmony in Industry* *Hawaiian Holiday* *Un Corrido de Toros* *This Land of Ours* *Tropical Fantasy* *A Salesman With a Story*	T.V. release (V. Halperin) Ind. Order of Foresters Bible Inst. of L.A. Die Cast Products San Fernando Valley Court Ind. Order of Foresters Ind. Order of Foresters Ind. Order of Foresters Security Natl. Life Ins
HUBBARD NUNT PROD. **Hollywood, Calif**	*The Progress Chromatograph* *Datarite Rapid Progress Magazine* *The C.E.C. Plexicoder* *Modern Diecasting*	Cons. Electro-Dynamics Cons. Electro-Dynamics Cons. Electro-Dynamics Harvill Diecasting Co
JOE MAESTRO FILM PROD **San Diego, Calif.**	*Portland Rose Festival* *San Antonio Fiesta, San Jacinto Fiesta Del Pacific San Diego* *Miss Universe Parade* *Long Beach*	Rose Festival Assoc San Jacinto Assoc. Ozzie Music Company



Producers Choose ARRIFLEX!

Producer	Productions Filmed with ARRIFLEX	Sponsor
NEW WORLD PROD **Na Hallywaad, Cal**	*Search for Wall Fla Index*	Lane-Wells
PAD PRODUCTIONS **Daly City, Calif.**	*Hypnotism Confidential*	Self Produced
	Experiment Perilous	Self Produced
	The Immoral Mr Teaso	Self Produced
	Childbirth under Hypnosis	Self Produced
W.A. PALMER FILMS **San Francisco, Cal.**	*Stand By*	United Bay Area Crusade
PARTHENON PICTURES **Hollywood, Calif.**	*Tools of Telephony*	Western Electric Co
	Horizons Beyond	Amer Tel & Tel. Co
PICTURES FOR BUSINESS **Hollywood, Calif.**	*Ball Fracturing, Fracture Assist Procedure*	B J Service
	Center of Hollywood, Ready to Go	Scott Buick
	Proof of Reliability	Western Gear Corp
	California Color	Bilan Productions
	Welcome to Music	Treasure Pictures
	Dollars by the Bag	Caminol Oil Co
RARIG MOTION PICTURE CO **Seattle, Wash**	*Public Service*	WRCV-TV
	One is Too Many	Pacific Coast Assoc. of Pulp & Paper Mfrs
	Down to Earth	United Good Neighbors
	Minuteman Ground Equipment	Boeing Airplane Co
	Ten Film Trailers	Wash. State Health Department
	Sixteen 27 min Films on Your Career	Weyerhaeuser Timber Co.
RILEY JACKSON PROD **Hollywood, Calif.**	*Dangerous Life*	TV Syndication
	Signal Oil Commercials	Signal Oil Co. of Cal
	Frat Commercials	Fiat Motors
	Jerseymaid Commercials	Jerseymaid Milk Prod
	Seven Up Training Film	Seven Up
RIVIERA PRODUCTIONS **San Pedro, Calif**	*Project II*	Cinema Guild
FREDERICK K. ROCKETT COMPANY **Hollywood, Calif.**	*Let's Keep America Beautiful*	Richfield Oil Corp
	Story of Baron, Youth Economy Run	Richfield Oil Corp
	Calif and Its Natural Resources	Richfield Oil Corp.
	Curves and Figures	E.K Williams Co
	Report to Employees	Kaiser Steel Corp
	J.U.T.	Lockheed Aircraft Corporation
	N.O.T.S	U.S Navy
	Ditching Techniques	U.S Air Force
	Choice in China	Amer Fine China Guild
TELEPIX CORP. **Hollywood, Calif.**	*The Size of a Smile*	Cleveland United Appeal
	Mankind is my Business	Indianapolis United Fund
	Story of Profit-Sharing	Sears Roebuck & Co
	TV Spots for	American Health Studies, Mickey Mouse Club, Mattel Toys
PAUL TERRY PROD. **San Fernando, Calif.**	*High Sierra*	Self Produced
	Disneyland	Self Produced
	Canyon River	Self Produced
THEATRE OF LIFE **Hollywood, Calif.**	*Lo, The Indian*	Theatre of Life
FRANK W VAIL PROD. **San Francisco, Calif.**	*New Magazine of the Screen*	Pathe News Inc.
	TV Spots	Leo Diner Films
	Hawaiian Travel Films	Warner-Pathe News
VISION, INC. **Spokane, Wash.**	*Trails End*	Vision, Inc.
GENE K. WALKER PROD. **San Francisco, Calif**	*Lifestream*	Standard Oil of Calif
	Taproots to	East Bay Municipal
	Living Waters	Utility District
	Wine and its Blessing	Wine Advisory Board

Producer	Productions Filmed with ARRIFLEX	Sponsor
JERRY WARNER & ASSOCIATES **Hollywood, Calif**	*Love and Marriage*	Colgate-Palmolive Co
	Ful O Pep Story	Quaker Oats Co
	The Egg Factory	Quaker-Oats Co
HORMAN WRIGHT PRODUCTIONS **Hollywood, Calif.**	*We'll Take*	Amer Road Builders Association
	The High Road	Oil & Gas Journal
	What's In It For You	

ALASKA

THE SHIELDS PROD **Spenard, Alaska**	*Alaska-Nature's Paradise*	
	Faces of Alaska	

CANADA

S W CALDWELL LTD **Toronto, Ontario**	*Fables of LaFontaine*	Gaudart Prod
	Good Year, Rothmen Cigarettes	Young & Rubicam
	Quarrie Operation	Canada Crushed Stone
	Star Weekly	Cockfield Brown
	Central Circle	National Film Board
CHETWYND FILMS LTD **Toronto, Ontario**	*The Broken Doll*	Ontario Safety League & Attorney-Generals Dept
	World of Silence	Canadian Broadcasting
	3 Film Stories in Spain	Canadian Broadcasting
JACK CNISNOLM NLM PROD LTD **Toronto, Ontario**	*The Rig 2, The Claim Stakers*	Ontario Dept of Mines
	The Blind River Story	Jay Machinery Co., Ltd
	Mine Makers	Canadian Ingersoll Rand Co , Ltd
	Sellarama	Theatre Confections Ltd
FLETCHER FILM PROD **Toronto, Ontario**	*Waterway Holiday*	Ontario Govt Dept of Travel & Publicity
	A Life to Give, Death of a Christian, The Royal Door,	Canadian Broadcasting
	Private Invitations	Canadian Broadcasting
	Living With a Handicap	Canadian Broadcasting
	It Makes Sense	Dunlop-Canada Ltd
	Thrill Driver	Dunlop-Canada Ltd
	Shipmates	Navy League of Canada
	From the Four Corners	Baptist World Alliance
	This is Canada	Theatrical
	TV Commercials for	Canadian Mental Health Assoc., United Appeal for Toronto
KLENMAN-DAVIDSON PROD LTD **Toronto, Ontario**	*Now That April's Here*	Internti Film Dist
	A Home of Their Own	Ontario Homes for Mentally Retarded Children
MASTER FILM STUDIOS **Calgary, Alberta**	*Oil is a Scientific Business*	Imperial Oil Ltd
	Gas Line East	Trans-Canada Pipe Lines
	Stampede Step-Over	Self Produced
	Alberta-Province of Opportunity	Calgary Power Ltd
	Meet Your Gas Company	Canadian Western Natural Gas Company
	Valley of the ROW	Calgary Power Ltd
MOTION PICTURE CENTRE LTD **Toronto, Ontario**	*A Chance in Sight*	Canadian Institute for The Blind
	His Crucible	Anglican Church
	Made in Heaven	Anglican Church
	A New House for God Accredited to Canada	
	House on Barracks Hill	
	A Matter of Taste	
	Novelty, Utility and You	
	Aluminum Oil Cans	Canadian Broadcasting
PETERSON PROD **Toronto, Ontario**	*TV Commercials for*	Kelloggs of Canada, Ford Motor Co , Lever Bros , and others
REAL RENOIT FILM PROD. **Montreal, Quebec**	*The Lost Missile*	Wm Rirke Productions
	Many TV Shows	Canadian Broadcasting

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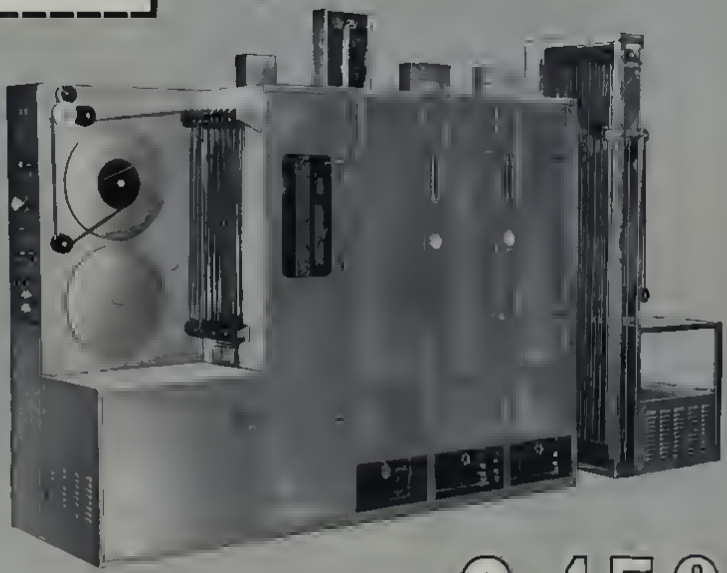
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Technical QUESTIONS & ANSWERS



Conducted by Walter Strenge, A.S.C.

QUESTIONS relating to cinematography or other phases of film production are invited from readers and will be answered by letter by Walter Strenge or by other qualified members of the American Society of Cinematographers. Questions and answers considered of general interest will appear in this column.—*Ed.*

Q Is it practical to shoot the original picture on 16mm Kodachrome or commercial color and then have a laboratory make 35mm prints by optical printing (keeping in mind that absolute top quality is required)? The subjects to be photographed require a camera speed of 64 fps. If photographed with a 35mm camera, would you say that one with registration pin is absolutely necessary? Most desirable speed in this instance is 96 fps. Can you suggest a firm who rents high-speed camera equipment?—*R. H. Cranston, R.I.*

Answer: The blowup method is the most practical one to follow when working with 16mm, color or black-and-white. Quality is comparable to, or on a par with, that which you'd expect from a 16mm color print. The quality is not as good, however, as you would obtain when photographing on 35mm color negative. If you decide to shoot 16mm Kodachrome and then blow it up to 35mm, consult your film laboratory first for advice and assistance in this procedure.

Regarding high-speed cameras, both 16mm and 35mm cameras in good working order are steady, with or without pilot pins. However, when operating them above 64 fps, maintenance of the equipment becomes a problem. For this reason, most high-speed cinematography is accomplished with rotating prism type cameras such as the Fastax. The difference in the cost of 16mm and 35mm film used in high-speed work is also a factor, in view of the greater consumption of film at high camera speeds.

Continued on Next Page



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TECHNICAL QUESTIONS & ANSWERS

Continued from Preceding Page

We understand that high-speed cameras now may be rented from Gordon Enterprises, North Hollywood, and from Camera Equipment Co., New York City.—*Lou Vincent, A.S.C. Associate.*

Q What is the optimum fps speed for the most dramatic effect when photographing explosions of miniature buildings and vehicles?—*B. R., Philadelphia, Pa.*

Answer: The scale to which the miniature is built is the governing factor in establishing the camera speed. Most studio miniatures are built on a scale of ¾" or 1" to one foot. For this scale, a speed of 96 fps is optimum.—*James Gordon, A.S.C.*

Q Answering a question recently in this column, Mr. Karl Freund indicated that since the MT-2 filter will convert sunlight (6000° K) to illumination of 3200° K color temperature that use of two MT-2 filter gelatins will reduce the color temperature of daylight (coming through a window of a set) to that of matchlight (1700° K). My understanding is that the alteration in color temperature caused when a filter is placed on a light source depends only on the spectral transmission characteristic of the filter, and that it has nothing to do with the thickness or number of layers of filter used. Am I right?—*C. S., Madras, India.*

Answer: When two filters are used simultaneously, the transmission of the combination is the product of the transmission of the individual filters, taken wavelength by wavelength. Where two identical filters of the sharp-cutting type are used together, the result is very little different than that obtained with one filter. Zero times zero is still zero. However, since no filter passes 100% of the light at any wavelength, the second filter will increase the density of the transmitted region slightly and steepen the curve in the cutoff region. A color temperature-correcting filter, on the other hand, has a very gradual change of density with wavelength. (See the 81 series of Kodak Wratten Filters)

Where two filters of this type are used together, the transmission again is the product of the transmissions of the individual filters (i.e., the density of the combination is the same as the densities of the individual filters at each wavelength). This results in a filter whose transmission (or density) curve is steeper than either of the filters used—e.g., 81 plus 81A is approximately equivalent to 81B, or two 81B filters approximate one 81EF filter.

It is evident, therefore, that two color temperature-correcting filters used together produce the effect of a stronger color temperature-correcting filter. On the MRD (micro-reciprocal-degree) scale the effect of the filters is directly additive.—*Karl Freund, A.S.C.*

Q Please explain why curved screens play such an important part in many of today's widescreen systems. Also, how is the image kept uniformly sharp edge-to-edge on a curved screen? When I project my movies on a sheet of papee which is curved in the same fashion, over-all sharp focus is impossible to achieve. Also, where can I obtain printed information on modern wide-screen systems?—*J. F. W., Pampano Beach, Fla.*

Answer: The reason the curved screen plays an important part in today's widescreen systems is that it enhances the audience's sense of participation; and the more the screen seems to "surround" the people, the greater the effect.

Better focus is obtained on a properly-curved screen by using the projection distance as the radius of the curvature.

Printed material on the CinemaScope widescreen system can be had by writting to Mr. Earl I. Sponable, 20th Century-Fox Film Corp., 440 West 56th St., New York, N. Y.—*Sol Halprin, A.S.C.*

Q I wish to produce the effect on the screen of a scene as viewed through a pair of binoculars. How can this be achieved?—*R. R. P., Portland, Ore.*

Answer: If you are shooting with one of the professional cameras, purchase a binocular matte and place it in the camera when photographing the scene. The effect of the binocular masking can also be produced when the film is printed, by a laboratory equipped to do special optical effects.—*Ray Mercer, A.S.C.*

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SOUND BLIMPS	16mm, Complete with matte box, filter holder, extension eye-piece, trunk	15.00	60.00
	35mm, Complete with matte box, filter holder, extension eye-piece, trunk.	15.00	60.00
BARNEYS	16mm, Covers camera, magazine, motor, matte box.	3.00	12.00
	35mm, Covers camera, magazine, sync motor, matte box (B & S barneys reduce camera noise 65% on 35 Arri 80% on 16mm Arri. Only barney to utilize kapok sheet lead foil multiple foam layers.)	3.00	12.00
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	35mm, 115v A.C. with capacitor	5.00	20.00
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MOTORS, GOVERNOR-CONTROLLED	16mm, 24 f.p.s.	3.00	12.00
	35mm, 24 f.p.s.	3.50	14.00
MOTORS, STOP-ACTION	16mm, pulse or time-lapse, with counter.	7.50	30.00
	Intervalometer for above	5.00	20.00
MOTORS, TORQUE	16mm, without magazines.	2.50	10.00
	16mm, with two magazines.	NC	NC
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	16mm, Pan Cinor "100"	12.50	50.00
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	400mm Kilfitt, with adapter	5.00	20.00
	600mm Kilfitt, with adapter.	10.00	40.00
	800mm Astro, with adapter and cradle.	20.00	80.00
LENSES, CLOSEUP	16mm, 40mm Makro-Kilar (foc. to 2").	4.00	16.00
	35mm, 90mm Makro-Kilar (foc. to 6").	4.00	16.00
	16mm-35mm Extension tubes.	1.00	4.00
LENSES, WIDE-ANGLE	16mm, 11.5mm Schneider Cinegon.	3.00	12.00
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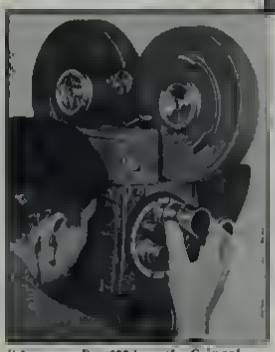


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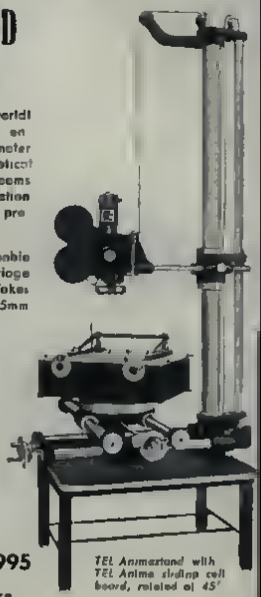
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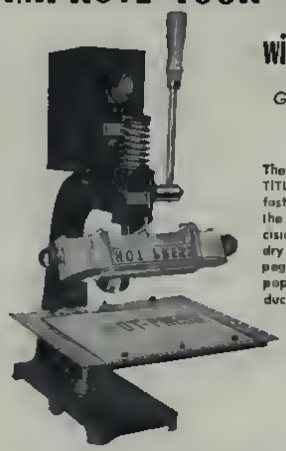


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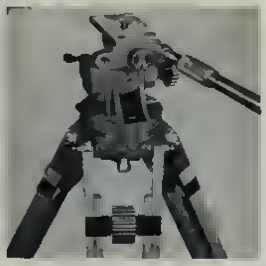


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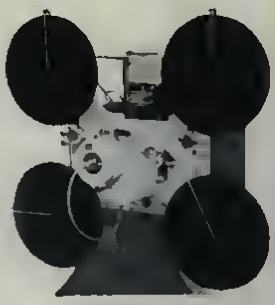
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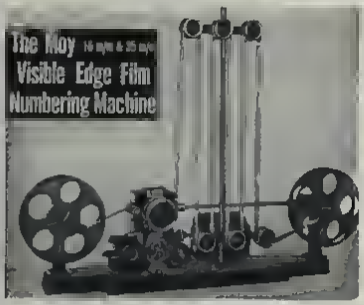
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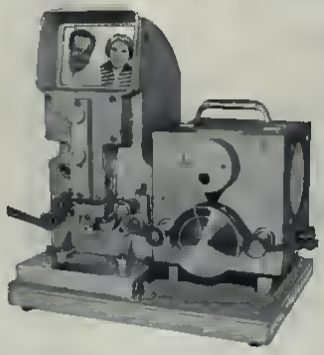
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CAMERA GLIMPSED AT THE ASC'S post-Christmas Open House, December 27th. (1) (from left) Sol Halprin, Ed Fitzgerald, Walter Strange (ASC Proxy), Mrs. Fitzgerald and Peter Mole (2) Alfred L. Gilks, Ed Fitzgerald, Mrs. Fitzgerald and Arthur Edeson (3) Arthur Miller, Don Norwood and Mrs. Norwood choose tidbits from tray (4) Hal Mohr, Mrs. Mohr (Evelyn Venable), Pev Marley, Mrs. Wm. Skall, Wm. Skall and Fred Gately enjoy a secluded corner (5) Mrs. Victor Milner, Loyal Griggs, Mrs. Ernest Laszlo, Edward O. Blackburn, and Victor Milner (6) Joseph Ruttenberg, Mrs. Joseph Walker, Mrs. Ruttenberg, Victor Milner, Mrs. Milner and Peter Mole at the hors d'oeuvres table (7) Mrs. Arthur Edeson, Mrs. and Mr. Wm. Skall, Mrs. Fred Gately and Mrs. Len Roos (8) Arthur and Mrs. Arling, Lloyd Knechtel, Ray Fernstrom, Mrs. Fernstrom and unidentified guest (lower left) More than 200 attended the annual event which affords once-a-year opportunity for informal meeting of members and mates with other society members

With Academy Awards Night set for April 6th, the process of selecting the best photographed motion pictures of 1958 is now under way. Several months ago, the directors of the Academy of Motion Picture Arts and Sciences reversed an earlier ruling limiting its annual awards to one, and this year there will be two "Oscars" handed out for best achievement in cinematography—one for color and one for black-and-white.

The directors of photography of the Hollywood motion picture studios, in a preliminary balloting, have selected ten color and ten black-and-white productions released during 1958 as candidate entries for Nominations for the Academy's photographic achievement awards.

Nominating ballots were subsequently mailed to all directors of photography who will now vote to select, from among the twenty productions on the preliminary list, five films in each classification which will become the 1958 award nominees.

Titles of the twenty candidate productions and the names of their respective directors of photography follow:

COLOR

Robert Burks, ASC, "Vertigo."

William Daniels, ASC, "Cat On A Hot Tin Roof."

Loyal Griggs, ASC, "The Buccaneer."

James Wong Howe, ASC, "The Old Man And The Sea."

Charles Lawton, ASC, "Cowboy."

Harold Lipstein, ASC, "Damn Yankees."

Franz Planer, ASC, "The Big Country."

Joseph Ruttenberg, ASC, "Gigi."

Leon Shamroy, ASC, "South Pacific."

Harry Stradling, ASC, "Auntie Mame."

BLACK-AND-WHITE

Joseph Ruroc, ASC, "Home Before Dark."

Daniel Fapp, ASC, "Desire Under The Elms."

Continued on Page 136



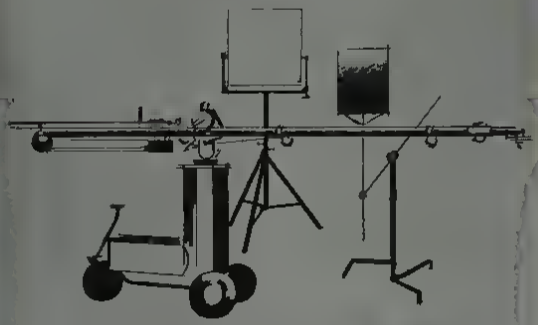
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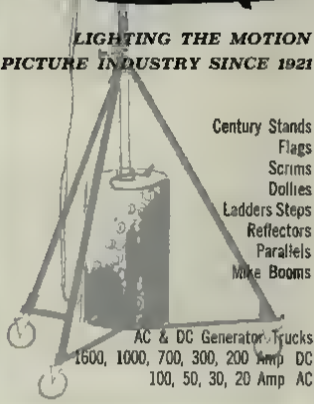
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LIGHTING THE MOTION PICTURE INDUSTRY SINCE 1921

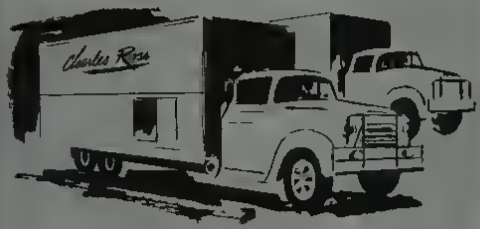


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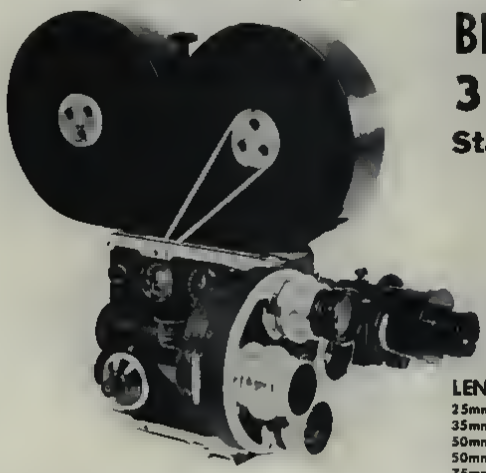
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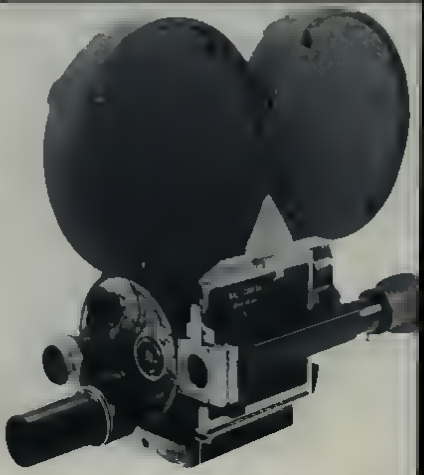
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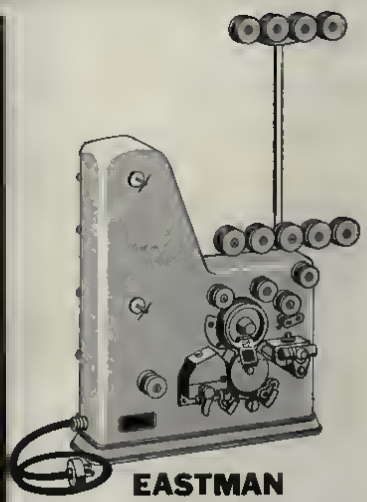


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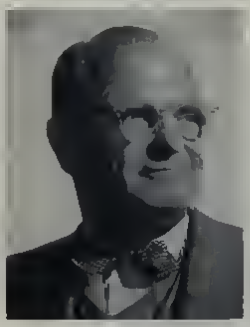
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Film Daily Cites 5 Cinematographers

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Joseph Ruttenberg, ASC

publication *Film Daily's* annual poll for Filmdom's Famous Fives—the five best motion pictures, directors, male and female actors and actresses and the five best photographed pictures



Jack Hildyard

Cited in the latter category were "The Bridge on the River Kwai," photographed by Jack Hildyard; "Sayonara," photographed by Ellsworth Fredericks, ASC; "The Big Country," photographed by Franz Planer, ASC,



Ellsworth Fredericks, ASC

"Gigi," photographed by Joseph Ruttenberg, ASC, and "The Vikings," photographed by Jack Cardiff. Both Cardiff and Hildyard are British cameramen.

More than 2,000 professional film reviewers, critics and commentators were invited by *Film Daily* to participate in this year's poll. Considered were all motion pictures placed in *general* release between January 1st and December 31st, 1958.

Film distribution companies, upon invitation, nominated 63 feature films, but selections by critics and reviewers and commentators were not limited to



Franz Planer, ASC

the 63. Those voting, however, were asked to limit their consideration to pictures seen for review purposes during 1958, whether at previews or otherwise.

Both "Kwai" and "Sayonara" were nominated for photographic achieve-



Jack Cardiff

ment awards by the Academy of Motion Picture Arts and Sciences last year, with "Kwai" winning the Oscar for cinematography for Hildyard. "The Big Country" and "Gigi" are among the early contenders for photography Oscars this year, as reported elsewhere in this issue ■

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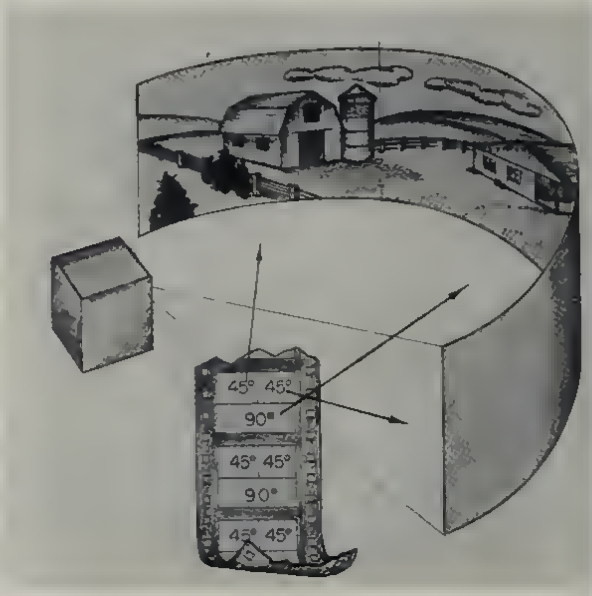
at Columbus Circle next to New York's new Coliseum

ULTRA-WIDESCREEN MOVIES WITH

New system developed by two veteran theatre operators promises to simplify photography and projection of Cinerama-style widescreen pictures



FILM CLIP REPRODUCED at left shows arrangement of three scene segments within each frame (defined by two dots at right edge) which is four sprocket holes in extent, same as for standard 35mm cinematography. The upper 45-degree segments are "criss-crossed" in the projection process so that the left segment fuses smoothly with right border of lower, central segment, and the right segment completes scene at the left. The projection process is further visualized in the illustration below



ONE CAMERA, ONE PROJECTOR

ONE OF THE THINGS that developers of ultra-widescreen motion pictures have sought to overcome is the great bulk in the multiple-camera units heretofore required to photograph such pictures. Both the Cinerama and Cinemiracle systems employ tri-camera units which photograph extreme wide-angle scenes on three strips of film. For screening, both systems require three projectors running simultaneously and in sync.

It has remained for two men in the exhibitors' field to come up with a possible answer to the multiple camera and projector problem. They are Rowe E. Carney and Tom F. Smith of Rolla, Missouri. Carney manages the Carney Theatres chain in Rolla, and Smith is credited with designing and building the first Auto-Scope Drive-In theatre at Urbana, Mo. The success of their achievement was reported recently in an exclusive story in the Rolla Daily News.

The two men combined their talents to build apparently workable models of both camera and projector which produce a wide-angle picture on a screen of mammoth proportions, in fact, a full half-circle, 180 degrees of vision. The old Rollamo theatre, now dark for many months but formerly the scene for many a movie thriller, was converted by Carney and Smith into a laboratory workshop. Here they developed the workable attachments to produce wide-screen movies with only one camera and one projector.

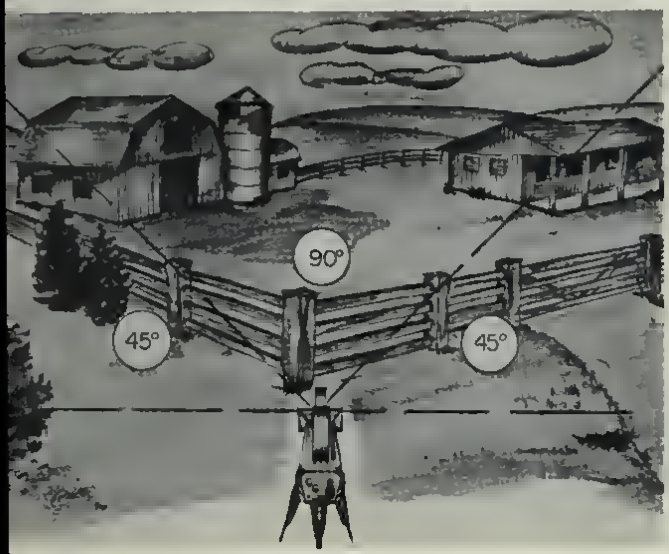
The project had its beginning when Rowe Carney saw the first Cinerama production in New York City in 1953. "Why not wide-screen movies with one camera and one projector?" he asked. "If a wide-angle picture could be produced using a single camera, and then be projected on a wide, curved screen with one projector, it would make the process practical. It also would make it possible for ultra-widescreen movies to be seen and enjoyed by people in smaller communities," he concluded with understandable exhibitor's logic.

Carney couldn't get the thought out of his mind, and took the idea to Smith. Smith was skeptical but became convinced when Carney took him to a Cinerama house to view the picture and get the feel of that process, "which puts the spectator right into the picture." They formed a company as equal partners, Carney to finance the project and help whenever possible, and Smith to devote his time to building it. The idea was good—that of putting a wide picture on one film and projecting it upon a screen describing a half-circle—but actually doing it was the problem.

After much thinking and planning, Smith finally told Carney, "I've got it." He had thought of the smaller pictures on the standard 35 movie frame, only half of the frame being used on wide screen pictures, the other half going unused. Use the entire frame, both men agreed. This was the answer.

But the method—that was the big job. Carney and Smith found their troubles had just started. They needed lenses and equipment. No matter what size lens they found, they needed something else. Not lens experts, they had to learn about them as they went along. Smith learned to saw glass, fit lenses. They wrecked old projection lenses, slide projectors, sought out

Continued on Next Page



NEW WIDESCREEN pictures are photographed with a single standard 35mm camera fitted with auxiliary lens attachment that encompasses 180-degree field. Attachment breaks up scene into three parts which are placed on the negative in the manner illustrated on opposite page. Two of the picture areas encompass 45 degrees of the scene; the other, 90 degrees, as shown at left. Photograph of the camera and its lens attachment appears on next page.



FIRST CARNEY-SMITH widescreen motion pictures were photographed with this motor-driven 35mm Wall camera mounted on hood of automobile. Headed attachment in front contains complex optics that divide scene into three parts on negative, as illustrated on preceding pages. (All photos on this page courtesy of Rolla (Mo.) Daily News)

discarded optical company equipment, anything they could get. Smith did much of this work at his closed theatre at Urbana. They approached the problem from three sides, working first on the camera lens. Then, as they put it, "lightning struck" and work was started on the system they now use.

Then came the problem of projection. Until now only the camera to take the picture had been completed. Smith moved back to Rolla and plans were made to install a huge curved screen in the Rollamo theatre. They built the screen, 74 feet wide by 16 feet tall, a complete half-circle. By this time they had bought a Wall 35mm motion picture camera, discarding their obsolete hand-operated job. Now, more months were spent learning to develop and print film in 100-foot lengths. (They purposely avoided sending their test films to a commercial laboratory in order to keep their project a secret until its perfection was assured.) Projection booths were built, torn down, built again. Camera and projection machine attachments were built and rebuilt. Finally, when no workable lens seemed available, Smith made plastic lenses to complete the system.

Carney and Smith mounted their movie camera first on a truck, then on the hood of a car, and photographed wide angle scenes around Rolla and at the capitol in Jefferson City. Now they had a camera which was placing three pictures on each conventional frame of movie film.

They expected their projector to "separate" and project each part of the frame onto the wide screen in the proper place, without distortion. But to their dismay, it was discovered at the first showing (viewed behind closed doors at the old Rollamo) that when projected the three pictures separated on the screen instead of moving together, due to side movement of the film in the projector.

This meant going back and rebuilding the camera lens, shooting more pictures—thousands of feet—changing lenses on both camera and projector, trouble shooting and more trouble shooting.

"Many times," said Carney, "we had the urge to abandon our project, but we finally hit upon the right combination and now we are able to pho-

Continued on Page 124



VAST 74 FOOT SCREEN having 180 degree curvature was mounted in Rollamo theatre for experimental screenings of new system films.



INVENTORS SMITH (left) and Carney adjust the auxiliary lens that re-orients the triple images to a single picture on the screen.

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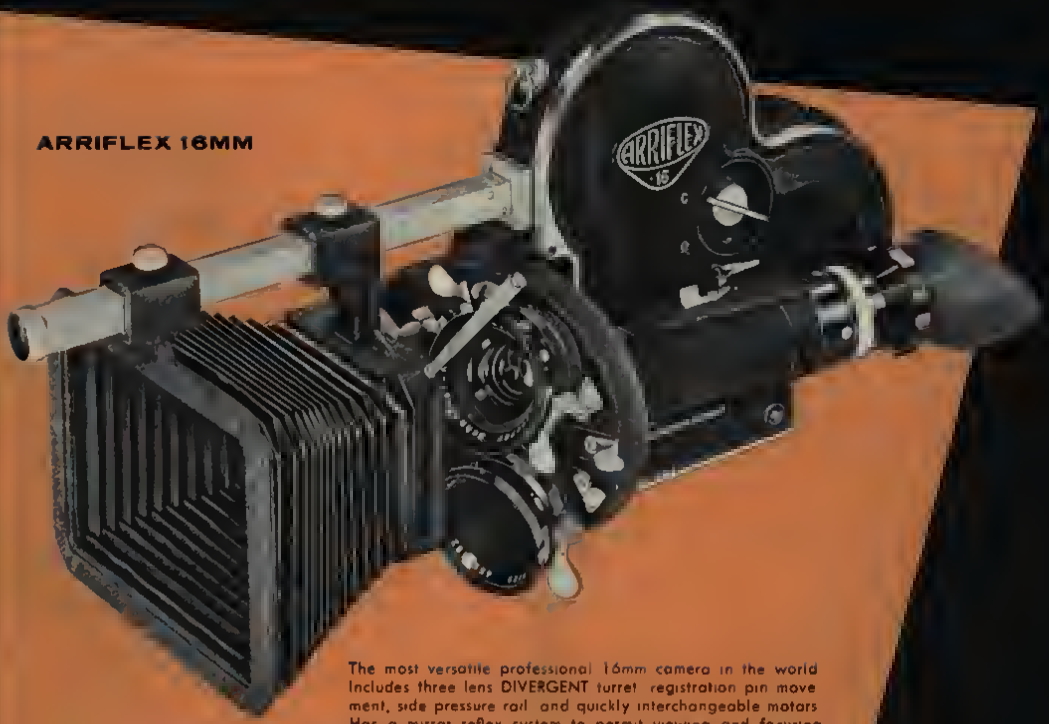
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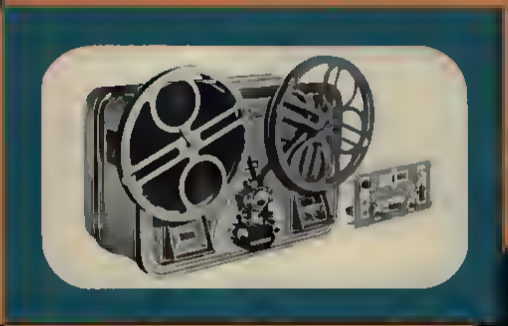
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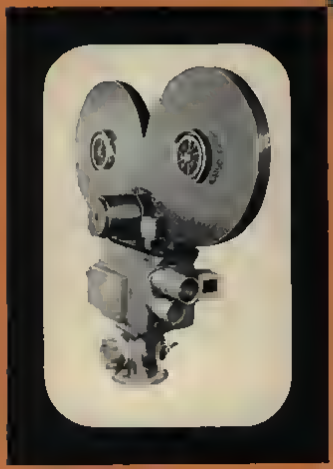
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WHEN A MAGNETICALLY-RECORDED film sound track doesn't sound right, the cause may be a number of things; but very often the trouble lies in the choice of microphone that was used.

Last month we pointed out that no other single item of sound recording equipment demands of the film maker undertaking his own recording such careful selection and evaluation as the microphone. Directional characteristics and output level of various types of microphones were discussed. This month we shall discuss such factors in mike quality and performance as frequency response, diaphragm types, and impedance—things you should really understand if you are to choose the best microphone for your requirements.

With a recorder, the frequency response is fixed so that you can measure it. However, it isn't within the capabilities of the average microphone user to measure a mike's frequency response. Therefore, you just about have to accept the frequency response figures quoted by the manufacturer. This can be a pretty confusing matter. You can look at the curves on charts, and all of them look about alike. Even the cheap microphone's frequency response curve looks essentially the same as that of the expensive microphone. I don't pretend to explain why this is so, but the point is that this is not the way to buy a microphone—by looking at its established curve—because no two microphones sound alike.

We checked this one time, when we had a very expensive microphone and a medium priced microphone, the curves of which looked exactly the same on paper. We placed the two microphones in the studio, sat a narrator in front of them, and had him read steadily as we switched back and forth between the mikes. There was an appreciable difference in quality. This quality difference may be rather obscure in explanation, but your ear can tell the difference. So, there's only one way to judge a microphone, and that is to try it.

Where it is not feasible for you to try out various microphones yourself it's advisable to ask the advice of others who are acquainted with mikes and their characteristics. Here, again, it's well to keep in mind that you get about what you pay for—but also keep in mind that there's no point in paying for quality beyond the point that you can use.

Naturally, we want to have a microphone that is smooth and uniform of frequency response as we can get. We use this as one measure in deciding on a recorder, and we want to match the microphone to it as best we can. The reason is rather technical, but we may be able to provide a simple explanation:

For instance, if we had a microphone that peaked at some voice frequency—say 3,000 cycles—any time a 3,000 cycle sound hit the mike diaphragm, the diaphragm would vibrate at that period. The undesirable factor is that the vibration or sound peak is in the microphone itself. Unless we knew that, we would not know where to look for the defect in the recording. On the other hand if we are using a microphone having a very smooth response and we hear excess energy at some particular frequency, we can eliminate the microphone as our trouble-source and proceed to run down the problem. In most cases it will be acoustical.

Another microphone characteristic that may be considered in making an appraisal is the type of diaphragm built into it. In general, it's not advisable to use a ribbon or velocity type microphone out on location. The ribbons are too sensitive to wind, shock and vibration. The practical kind of microphone to use on location is a dynamic or condenser type. Most of the latter employ a tight-stretched diaphragm and are quite sturdy. In fact, some of the newer

Continued on Page 131

The fourth in a series of articles on Do-It-Yourself sound recording by Allen Jacobs.



TED McCORD, ASC, (right) photographed 'The Hanging Trees," a Baroda Production for Warner Brothers, in Eastman Color using Mitchell cameras in which aperture was enlarged to full frame to obtain maximum picture information for reduction printing and better results from lenses. At left of camera is his assistant Wally Meinardus



EXTERIORS, as well as interiors, for 'The Hanging Tree" were given added pictorial impact because of the improved perspective which the wider aperture of camera enabled the lenses to render

How full-aperture photography and reduction printing enhanced the pictorial quality of

"THE HANGING TREE"

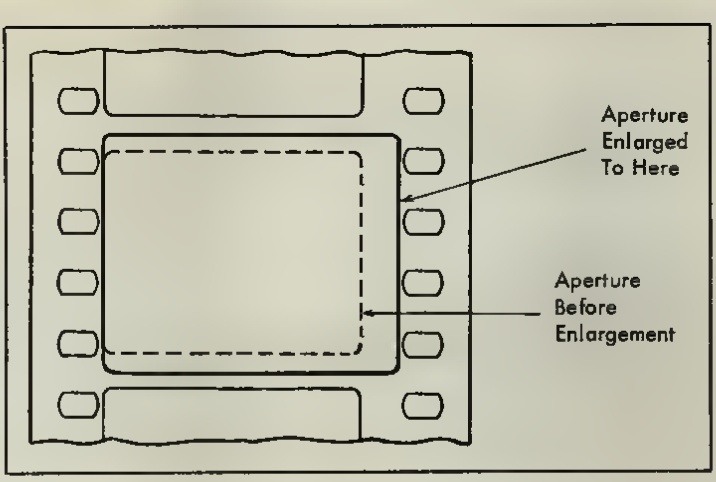
By ARTHUR E. GAVIN

BECAUSE IMPROVED definition and the reduction of grain size in color motion pictures are subjects of continuing research by engineers and technicians in the motion picture industry, a technical innovation applied in the photography of "The Hanging Tree" may well become standard practice where color productions are photographed on 35mm film with Mitchell cameras.

The innovation afforded both Ted McCord, A.S.C., who photographed the picture, and Technicolor Corporation, which processed the Eastman Color negative and made the prints, advantages that enhanced the production pictorially and which are readily observable on the screen.

The practice of reduction printing as a means of gaining a quality increase has been employed successfully for many years. The degree of improvement is governed by the amount of the reduction, and is realized in decreased grain size and improved definition.

While the greatest gains are realized from the ultra-large negatives such as 65mm and 8-perforation Technirama and VistaVision, proportionate advantages may be had by utilizing the full frame of the 35mm aperture and then reducing the image as required in the printing. By taking advantage of the reduction factor the 4-perforation full-aperture 35mm frame affords, the 20% gain in reduction



HOW APERTURE of the Mitchell cameras used by Ted McCord were enlarged for color photography of "The Hanging Tree." Diagram compares sound aperture area of conventional 35mm cameras with that of full-frame aperture used in filming this production. Dimensions of latter are .980" x .735", same as aperture used before advent of sound for 35mm silent films.

to the conventional sound film frame area is a valuable consideration in improving grain pattern and definition. All of the picture information contained in the full aperture is reduced and moved laterally, leaving the proper space for insertion of the sound track.

Before production was started on "The Hanging Tree" at Warner Brothers' studios, the Mitchell cameras that Ted McCord and his crew were to use in photographing the picture underwent slight alteration. Briefly, this consisted of altering the aperture plate in each camera, enlarging it from the conventional "Academy aperture" dimension to full aperture—that is, the aperture was extended to the sprocket holes on either side, as shown in the diagram above, and also extended at top and bottom.

The photographic advantage is realized in the increased angle that can be covered from a given camera position, regardless of lens used. For example, when using a 50mm lens, a camera having a full aperture and set up at 100 feet from a subject would cover a horizontal field of 48 feet. The same camera fitted with a sound track aperture, would cover only 42 feet at the same distance.

As Ted McCord points out, when any of the standard lenses are used on a camera with the full aperture, they produce the results for which they were originally designed, giving the photographer all the advantages of the the lens' true focal length. Moreover, he says, the perspective is truer—even though it is necessary to set up the camera differently than where the smaller, sound track aperture is employed.

The improved pictorial and perspective results McCord achieved with the full-aperture camera are especially apparent in his wide-angle shots, and in the many closeups of the players seated around the gambling table in which just enough of the background and surrounding details of the set are included in the shots to maintain the orientation

Continued on Page 130



PHOTOGRAPHING A closeup for "The Hanging Tree." Here definite photographic advantages were realized in the increased angle of coverage the widened aperture afforded



WIDENED APERTURE permitted camera lenses to produce the full photographic results for which each was originally designed, as in this and other exterior camera set-ups.

ANIMATED FILM TECHNIQUES

PART VII



"THE WATER'S STIFF!" says Thumper as he walks out on ice pond. As he speaks, his facial expression, carefully animated, approximates that of a human. Illustrations on next page show how this scene was planned and the series of "rough" drawings executed to achieve the desired visual effect.

Animating dialog—the vocal expressions of cartoon characters—demands a special talent of the animator

When A Cartoon Character speaks on the screen, the effect of his speech depends as much on how the character is animated as on the dialog text. The great appeal of animated cartoons lies in the realistic, life-like manner of the characters. When they speak, the dialog is accompanied by the same facial expressions we see when people speak the same words with the same emotion. These life-like mannerisms and facial expressions are as carefully executed by the animator, in what is known as dialog animation, as all the other action or movement given the cartoon character throughout the production.

The animation of dialog presents the animator with problems quite different from those encountered in animating straight action, and imposes demands on the animator's ability to analyze not only action, but emotions, pantomime and all the other basic fundamentals of acting.

In the early days of sound cartoons, a character didn't get much acting into his dialog. It was mainly a matter of opening and closing the mouth, trapdoor fashion. Dialog was generally spoken to a definite rhythm to fit the musical pattern or score to which the first sound cartoons were animated.

Dialog no longer plays a supplementary role but is an important means of giving full expression to a cartoon character's personality. Today, great care is used in casting voices for a character. "Fitting human voices to cartoon characters accounts for fully half the charm of our animated features," says Walt Disney, whose latest animated feature, "Sleeping Beauty," filmed in the Technicolor Technirama process, is soon to be released. "Sleeping Beauty" offers the finest example of the thoughtful care used in casting voices for animated films which, minus the sound track, would be mute figments with little illusory magic. But with human speech and song, animated characters have the wonderous eloquence which sets them apart from all other entertainment personalities. The human voices given animated cartoon characters further enhances the realism of their life-like action, enabling them to portray the full gamut of emotions evoked by animation artists.

The dialog for an animated cartoon invariably is recorded in advance of starting the art work and is recorded to fit the general timing that the director has allowed for speech in the picture. Allowances are made for the freedom of delivery and natural timing of the actor engaged to "give voice" to the character.

After the dialog is recorded, the animator receives a transcript of it in a form called a "dialog reading." (See illustration, next page.) This is a breakdown of the words and syllables of the speech into terms of footage or number of frames of film. The operation of reading the dialog track takes place in the film cutting department. Here a cutter who specializes in this phase of the production threads the sound track in a Moviola or sound reader and runs the track back and forth, over and over and at various speeds, to familiarize himself with the dialog. At the same time he makes note of the modulations in the track and with a grease pencil spots the positions of words and phrases on the sound track film itself. He then breaks each word down to its individual syllables—even individual letters—and indicates on the dialog reading chart the exact length, in terms of frames, of each of the dialog or word components.

In the illustrations on page 115, there appears a series of 22 roughs of Thumper, Bambi's rabbit pal, completely

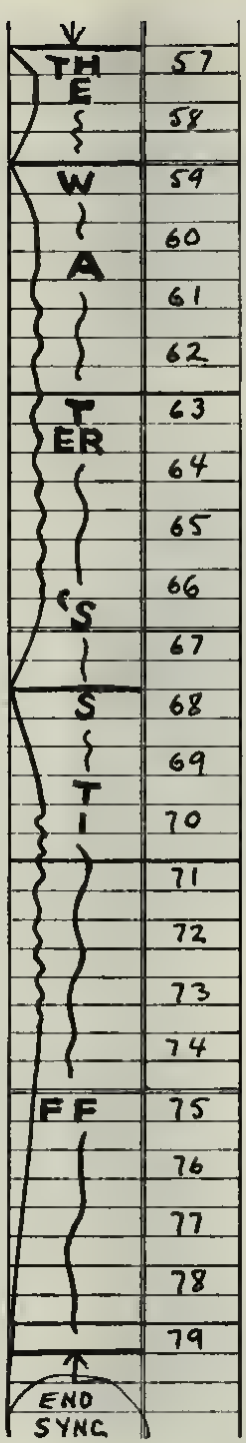
animated to show him exclaiming "The water's stiff!" At the left of these drawings is reproduced the dialog reading of the sound track showing how the three words were carefully analyzed and charted for the animator. According to the cutter's estimate, the three-word dialog would require 79 frames of film to animate. In the left-hand column of the chart, the words (reading down from the top) are spaced out according to the number of frames required, with the corresponding frame numbers indicated at the right. The animator worked from this sheet in preparing his drawings

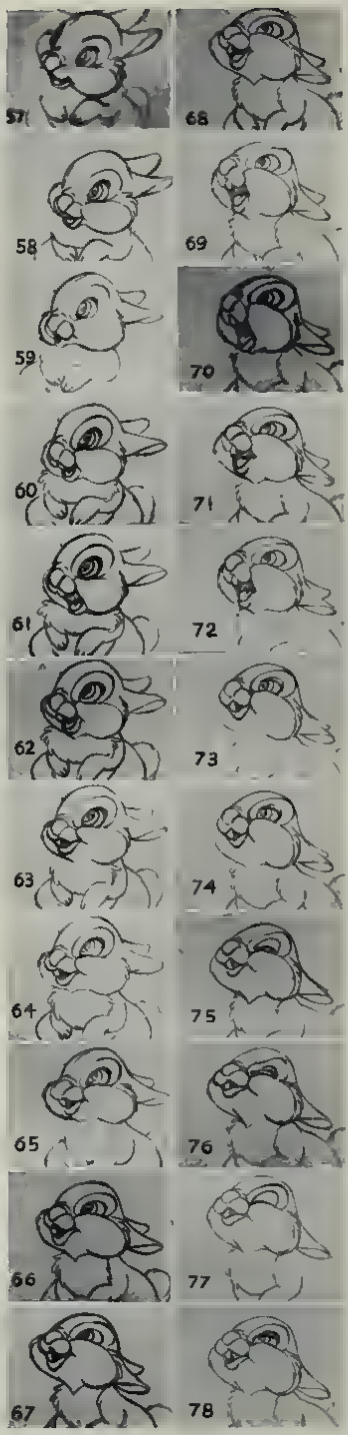
On the dialog reading chart, variations of volume on the sound track representing the inflections or subtleties of the voice are indicated by a wavy line, enabling the animator to accent facial actions accordingly. The same procedure is applied where action is fitted to some eccentric sound effects pattern, only in a more limited degree, as only the main accents of the sound are read at the time the analysis is made by the cutter.

In the example illustrated, the careful manner in which the animator drew the mouth action of the character can be seen by comparing each drawing with its corresponding frame number in the dialog reading chart. The dialog, "The water's stiff!" is spoken by Thumper in referring to the frozen surface of a pond. The accuracy with which skilled animators fit their characters to dialog has been demonstrated on many occasions by persons who are totally deaf who are able to understand the dialog of cartoon personalities simply by watching the mouth action.

Still another type of animation that has its own peculiar problems is the animation of "effects"—all the non-living, atmospheric material that might have to move in the scene, such as water, dust, leaves, rain, snow, clouds,

Continued on Page 124





THE "ROUGHS" numbered 57 to 78 represent a sequence of action in Walt Disney's "Bambi," in which Thumper speaks three words: "The water's stiff!" Adjacent diagram is section of dialog analysis prepared for this scene, with each word, syllable and letter (reading top to bottom) shown in its proper length corresponding to its placement on film. Wavy line indicates variations in volume in sound track from which analysis was prepared. (All illustrations copyrighted by Walt Disney Productions).

The new, easy way to lip-synched filming, an location or in the studio is with the

ARRICORD 35

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The Arricord 35 is a combination of the latest Arriflex 35mm Model IIB camera and a magnetic recording unit which uses perforated 17½mm magnetic recording film. The combined units are housed in a compact sound blimp having external controls for both sound and picture recording.

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The Arricord answers the demand for a compact and portable double system sound recording camera with the convenience, money and labor saving features of a single system camera. Because the entire unit is driven by a 24 Volt battery it eliminates the need for AC generators or inverters.

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TECHNICAL DATA

Approximate weight of Arricord	72 lbs.
Approximate weight of Amplifier Case	28 lbs.
Approximate weight of battery case	42 lbs.

Camera part: Same features as Arriflex 35. Three lens turret with remote follow focus and diaphragm drive. 400 ft. magazine capacity. Through the lens focusing and viewing.

Sound part: Made by Klangfilm to professional standards. Takes 450 ft. perforated 17½mm magentic film. Two microphone inputs. 200 ohms. 2 way mixing. Valve metering. Electronic slate and many other features.

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PREPARING to shoot a scene in Alaska for the Ed Sullivan TV show, with temperature 15 below zero and winds up to 20 mph



CAMERAMAN Pahle, right, face hidden by Parka, found working with gloves in sub-zero temperatures difficult

ASSIGNMENT "FROSTBITE"

That's what Ted Pohle got when he went to Alasko recently to photograph o TV show there for Ed Sullivan

"ALASKA IS COLDER than a well-digger's anklets and proved a real challenge to the filming of a top television production such as the Ed Sullivan Show," says Theodore J. Pahle, A.S.C., who accompanied Sullivan and his troupe to the frozen north recently and photographed scenes for a forthcoming Sullivan TV program.

An extensive Air Force briefing en route gave Pahle a good idea of what to expect in the way of problems. However, he soon discovered that there were a lot of things that just weren't "in the book."

"They told us to expect average temperatures of 15 degrees below zero," says Pahle. "But they didn't mention the biting wind of 15 to 20 miles per hour that always managed to come straight at you. Actually, you don't realize what 15 below means until you start herding some fifty pieces of equipment and making sure it's all protected and properly stowed.

"We used Eastman Kodak Plus X for exterior photography and Kodak Tri-X for interiors," Pahle continues, "taking great care to keep film at as near constant temperature as possible both in storage and transit. Because of the prevailing low Arctic temperatures it was important to use extreme care in handling the film to prevent static from ruining it. All exposed film was wrapped carefully in metal foil and mailed daily to New York for development.



PARKA-CLAD Ted Pahle and TV showman Ed Sullivan (reclining in Alaskan sleigh) during recent filming trek to Alaska

"My gear included two Mitchell 35mm and two Arriflex 35mm cameras, completely winterized with a change of grease and oil. As a further precaution, the Mitchells were equipped with hot plates, and wind shelters were erected for the cameras for all exterior shots.

"When the show moved further north to Kotzebue, a remote radar station on the Bering Sea, the cold was so intense that it was necessary to borrow Air Force jeeps equipped with hot air blowers and a flexible tubing set-up to keep our cameras warm and operating. The equipment looked like something out of Buck Rogers, but it proved a lifesaver for our cameras. I also tapped the Air Force for a 2,000-watt lighting unit, which I aimed at the motors of my cameras to warm them and insure a constant 'rpm.'

"Another interesting problem encountered on this assignment was the

Continued on Page 122



ART FOR TYPICAL one minute TV commercial for Tek products, produced by Transfilm, Inc., in new "visual squeeze" technique. Photography on an animation stand, the photos appear on TV screen in staccato-like manner keeping pace with beat of music and voices



IDEA FOR TV commercial for Aero Shave is born here. J. Walter Thompson producer Law Schwartz (center) examines storyboard prepared by art directors Jack Wahl (standing) and Art Koch

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VISUAL SQUEEZE one-minute commercial for Ford cars in which still photos, an original music score and voices which sing or chant to copy written in a scanning metre all combine to produce a great deal more of sponsor's message within the allotted 60 seconds

Both still and animation photography are combined in a new system that produces sprightly commercials for TV that command attention

By ALBERT BOYARS



ART KOCH puts the finishing touches on the Aero Shave storyboard which will be presented to sponsor's ad agency for approval before the idea is transferred to motion picture film.



AFTER THE STORYBOARD continuity has been approved, photographer Howard Zieff made over 500 photographs of models Stan Sherwin and Pamela Curran, of which 24 were used for the commercial.



TRANSFILM'S ANIMATION director Bill Hudson lays out the Aero Shave photographs as he listens to playback of pre-recorded sound track and selects photos best suited to the commercial message



PHOTOS THEN GO to Transfilm's animation cameraman Al Schirone who photographs them with animation camera according to script and timing instruction sheet supplied him by director Hudson

THERE ARE REALLY few motion picture devices, which, to the film producer, can be called "new." But since the production of television film commercials has only been going on for about ten years as compared to more than 50 years for motion pictures generally, there are still a great many cinematic devices which are yet to find their way into TV.

Transfilm, one of the major New York producers of commercials, has been quite busy these past two months turning out some clever variations of the old filmograph technique for television. This is simply the use of still photographs or other art which are given an appearance of action when photographed under an animation camera. The illusion of movement is created by moving the camera to produce zooms, pans, and pop-ons, etc. For industrial films, this technique has proved a money-saver. But, the similarity ends here. Applied to TV commercials, the technique becomes considerably more intricate and about equal in cost to the average animated spot.

Robert Bergmann, vice-president of Transfilm's TV Division, said that his company has turned out about 5,000

Continued on Page 126

Multiple Reel Film Editing Aid

A new tool that simplifies and expedites the editing of sound effects and music for 35mm and 16mm films

By FREDERICK FOSTER



FIG 1—Typical film editing set up of two Easy Editor motor-driven film supply and takeup units with films threaded through synchronizer (in center of table) Using foot controls (arrows) editor is able to stop, start and regulate speed of film travel, leaving hands free to examine, cut, or splice the various films.

THE ADVENT OF SOUND for films and the growing practice of shooting a picture's action from several angles for cutting purposes produced problems for film cutters and music and sound effects editors a few years ago that were solved only partially by the development of the gang synchronizer and the shaft extension for rewinds. For it now became necessary for the editor to work with not one but several reels of film at one time—cutting and splicing from one to the other—until the desired continuity and sound track was produced from the multiple reels of film

The handling of multiple reels proved cumbersome because, for one thing they all revolved at the same speed as the rewind crank was turned with the result that some film strips "flowed" faster than others, creating a troublesome takeup problem.

Joseph Yolo, veteran cinematographer, film producer and inventor of cinematographic equipment felt the weight of the problem probably with greater impact than others because he set to work to solve the problem and expedite the cutting of sound films

I well remember his first "breadboard" model, which he transported to Hollywood in the trunk of his car from his home workshop in Yakima, Washington He called it simply a "synchronizer," although it was more than that because for the first time it provided the means for film editors to move from one to six strips of film across the work table, all at uniform tension and without the troublesome slack and the taking up of individual strips that heretofore had plagued them.

Now tested during more than three years' rigid service in several busy Hollywood cutting rooms, Yolo's synchronizer today is recognized one of the most important developments in film editing equipment in years. The trade name for the equipment now is "Easy Editor." But this simple unpretentious title belies its true worth This year, Yolo's Easy Editor is being evaluated



FIG 2—The various reels unwind or takeup film at uniform rate, so that there is never the problem of film pile up and coasting of reels

Any reel may be instantly removed from the drive units without disturbing any of the other reels

by the Academy of Motion Picture Arts and Sciences for a Technical Award which, if granted, will be presented to him in Hollywood the night of April 6th, when the Academy bestows its annual Oscars for achievement.

The Easy Editor equipment is pictured in the accompanying photos The orderly manner in which the film strips appear in Figs. 1 and 2 is normal —not an arrangement for the photographer. This uniform tension is accomplished by means of an ingenious "slip drive" that permits the film to unroll from the various reels at uniform speed, regardless of diameter of the roll of film on the reel. Normally, a roll of film six-inches in diameter will revolve slower than one only two inches in diameter. But on the Yolo Easy Editor the film from all reels unwinds at the same rate of speed

The Easy Editor is considered one of the most important advances in multi-reel film editing since the inception of the motion picture industry. Yet, basically, it is a simple device consisting of two independently-controlled winding heads (Figs. 1 and 2). These are but assemblies of single-reel driving units of elementary design. Each reel drive consists of two rollers, an aluminum frame, a reel stabilizing arm and reel guide assembly. The rollers are of natural rubber, on aluminum sleeves, mounted on precision-ground ball bearings. The reel is supported and rotated on the rubber rollers. It is kept in alignment by a pair of rubber-faced discs which are inserted between the reel flanges Attached to one rubber roller is a metal disc. This is friction driven by a fiber roller powered by an electric motor. Up to six of these single reel units may be mounted side by side.

When mounted in working position in the Easy Editor, one edge of the reel-driving unit frame rests on an eccentric. The latter may be adjusted to optimum clearance between the fiber drive roller and drive disc, producing adequate traction to drive the reel under all operating conditions. Any one or all of the reels in the unit may be idled by means of control rods extending through the machine housing at each reel position, as shown at 4 in Fig. 4. In this operation the drive disc is lifted above contact range of the fiber roller allowing the drive unit to remain idle.

The method of supporting and rotating reels on rubber rollers instead of the conventional rewind spindles permits speedy loading and winding of reels of film. Usually, no two rolls of film in a multi-reel operation are ever the same size, and they need never be when placed in the Easy Editor; because the slip-friction drive equalizes the film flow so that all strips move uniformly, both in unwinding and in take-up. Any reel can be withdrawn at any time without disturbing the other reels.

A braking system enables the opera-

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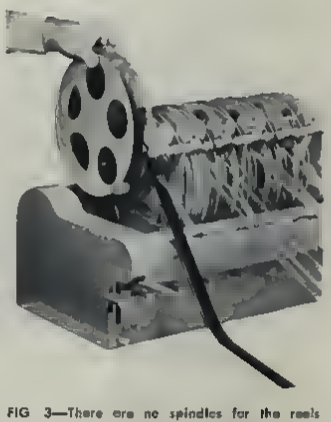


FIG 3—There are no spindles for the reels Each reels rests on a roller with slip drive so that it unwinds or takes up film at uniform rate with the rest



FIG. 4—The levers by which reel action is manually controlled by the operator. 1) brake lever, 2) auto rewind switch, 3) motor drive control, and 4) individual reel "hold" control



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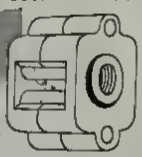
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tor to stop the flow of film instantly without strain or damage to the film strips. Brake control levers are conveniently located and one brake shoe serves all reel drive units. Braking prevents film pile-up and coasting of reels when the motor power is cut off. Maintaining moderate brake pressure on the feed-reel side causes the take up reels to wind equal footage regardless of variation in roll diameter.

When splicing is done during the editing procedure, films may be automatically rewound. First they are placed beneath the stopping rollers. Then the control lever is locked in operating position. Unattended, the machine speedily rewinds all films at the same time, and comes to a stop when the last reel is unwound — microswitches on the rollers effecting automatic cutoff as each roll is unwound.

With its precision power drive and accurate braking arrangement, pulling back to the sync mark presents the editor with no problem. He may sit throughout the entire editing procedure. There are no cranks to turn, no film pile-up worries. When pulling back the picture film to cue for dubbing, the sound track reels can be made to remain stationary through the braking and idling controls mentioned above. All sound track splices can be made by the editor as he proceeds with editing. When he gets to the end of the rolls, they will be automatically rewound and ready for dubbing.

The versatility of the Easy Editor is further evidenced by the fact it can serve as a rewind for a single reel of film, without the need of disturbing an editing set-up of multiple reels, simply by momentarily making inoperative the other reels. In other words, the Easy Editor permits selective winding of film as well as winding or rewinding of reels in multiples.

The starting and stopping of film movement as well as the rate of film flow can be controlled by foot, as well as by hand, by means of foot-pedals as shown in Fig. 1, thus leaving the hands free for handling the film.

Editors of sound effects and music have lauded the great speed and ease of film handling that use of the Easy Editor affords, with its easy film loading feature and no center rewind shaft; its smooth power drive in either direction, controlled by hand or foot-pedals, instant reel withdrawal; and its ability to handle 16mm and 35mm film at the same time in any combination.

The equipment is presently on display at Hollywood Film Company, 956 Seward Street, Hollywood, which company has been appointed national distributor. ■

ASSIGNMENT "FROSTBITE"

Continued from Page 117

effect of the magnetic pole on our exposure meters. We therefore took no chances and used four meters for every reading to make certain that we would get accurate readings.

"Our personal cold-weather gear, which was provided by the Air Force, did a wonderful job of keeping us warm. However, we still relied on the 'buddy system' as an extra precaution against frostbite. Since you can never tell when frostbite strikes, an important safety measure we followed was teaming up with another man so that we could watch one another for frostbite indications.

"Speaking of frostbite," adds Pahle, "making simple camera adjustments can be pretty difficult when you don't dare remove your gloves for more than 15 seconds at a time.

"Despite the cold, we always had an audience of interested military personnel and curious Eskimos whenever we were filming. They didn't stick around very long, but still they couldn't resist a peek at anyone who had the nerve to be out doors shooting pictures when they could be toasting up in a warm hut."

Pahle was surprised with the great

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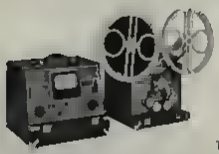
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Sound Equipment Checklist

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 X 400	When lightweight portability is a **must** the 27 lb X-400 Type 1 is the answer! Another reason so many producers choose this machine is that it is genuinely professional, and yet, surprisingly economical! From $985.	X			X		X	OPTIONAL	OPTIONAL	OPTIONAL						X	X	OPTIONAL
 TYPE 1	The Type 1 is a miniaturized version of the Type 5. Low power consumption and extreme portability has made this 39 lb unit a popular selection for remote location production by leading professional motion picture studios. From $1360.	X			X	X	X	X	X	OPTIONAL		X				X	X	OPTIONAL
 TYPE 15	The X-400 Type 15 is designed for the man who wants everything in one case ... playback amplifier, monitor speaker, footage counter and torque motors. You can be proud to have this machine represent you on any sound stage! From $1385.		X	X			X	X	X	OPTIONAL	X					X	X	OPTIONAL
 TYPE 5	The most popular magnetic film recorder in the world is the Type 5! With this unit and all its operational conveniences, you are definitely in the "major league." The Type 5 owner always starts his pictures with a special feeling of confidence in the realization that he has allowed no compromise in the selection of equipment. From $1570.		X	X	X	X	X	X	X	OPTIONAL	X	X	X			X	X	OPTIONAL
 MARK 1X	There is nothing on the market that compares with the remarkable Mark 1X. This unit is in a class by itself ... with push-button remote controlled relay functions, plug-in audio elements and all the "extras" that make for flawless recording under the most adverse conditions. From $2145		X	X	X	X	X	X	X	OPTIONAL	X	X	X	X	OPTIONAL	X	X	OPTIONAL

**Regardless of the model you select, you can always depend upon equipment with the "Magnasync-Magnaphonic" label ... equipment made by the international leaders in the design and manufacture of quality magnetic film recording systems.*

MAGNASYNC Magnaphonic SOUND SYSTEM

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number of queries put to him about television by local citizens. Although the major cities in Alaska have television reception (5 channels are currently available) there is virtually no television reception in the remote Alaskan area. A great many of the inhabitants already have sets in their homes and are eagerly awaiting the day when they can receive a regular schedule of programs.

"It's a wonderous land up north," says Pahle. "You can't possibly appreciate the scope of our newest state or the stout-hearted modern-day pioneers who are settling there until you see it all first-hand."

"Nevertheless," he concluded, "I'll still take my frost on a tinkling ice cube and my Alaska baked. I'll always be a New Yorker at heart."

ULTRA-WIDESCREEN

Continued from Page 106

tograph and project ultra-widescreen motion pictures with only one camera and projector.

"The purpose of our system, which is neither anamorphic nor compression," he continued, "is to photograph and project a picture having a scope of 180 degrees without having to use three cameras and three projectors. We have accomplished this by using a lens attachment which fastens to the front of the camera. The attachment, which takes in a 180-degree view horizontally, breaks up the scene being photographed into three segments which are arranged optically within the area of a standard single frame of 35mm film.

"In projection the procedure is similar, only in reverse to that of the photography. Here the film is projected into the attachment which separates the three picture areas and arranges them in their proper order on the screen. It is unnecessary to stay strictly within the radius of the screen as a special device within the attachment corrects any keystone effect. It is only necessary to maintain the approximate level horizontally between the attachment and the center of the screen.

"With the entire wide-picture composition on one film instead of three, it is possible to maintain complete control at all times over the entire screen, which has an aspect ratio of 4½-to-1. Should the film shift from side to side or jump in the projector, all three segments of the picture move together, thereby eliminating any appearance on the screen of overlap, separation or jumping between segments," Carney concluded.

Recently members of the editorial staff of the Rolla Daily News became the first public audience to witness a screening of the Carney-Smith wide-screen pictures behind closed doors of the Rollamo theatre. Seated about midway down in the theatre, they viewed the presentation on the vast, curved screen which completely shut from view the old stage and "wrapped around" to the sides of the theatre.

"Smith started the projector," reports one eye-witness, "and there before us was a moving picture of the Missouri capitol building—so wide that we could see the Supreme Court on the south side of High Street and all of the state capitol across the way at the same time. Another scene showed Bill Bray's huge quarry, near Rolla, and another, the full length of a Frisco passenger train."

As in Cinerama and Cinemiracle presentations, the Carney-Smith pictures give the spectator the feeling of being "in the picture and a part of the action." Barely-noticeable lines of demarcation appeared between the picture segments but were not too pronounced or disconcerting.

Carney and Smith have obtained several patents on their attachments and system and have expended several thousand dollars to date in the course of perfecting them. They hope ultimately to interest some major studio or film producer in the system for practical use on a world-wide basis.

ANIMATION

Continued from Page 115

fire, shadows, and so on. The importance of this type of animation was shown by the extent of its use in "Fantasia," wherein the pictorial and atmospheric components of the scenes often were totally instrumental in telling the story. Effects animators are specialists in that line, and spend as much time in conscientiously analyzing such things as the movements of ripples in water, for example, as a character animator would in studying the movements of a swimming animal creating those ripples.

For the sake of convenience, effects are generally animated on a cel level separate from any of the characters. If effects are to directly contact a character, the animator handling the character will usually suggest roughly the placement of such material, but leaves the exact drawing and timing up to the effects animator. There is just as much of a problem in animating a stream of water to look and act like water as there is in registering a convincing feeling of surprise on the character it hits.

Effects are previewed by projection in the "rough," the same as character animation, and judged similarly. If the action looks okay, the go-ahead signal is given for cleanups and final in-betweens. When these processes are completed, a final test is shot of the entire scene for a last checkup before moving it on to the inking and painting

MINIATURE INTERCOM FOR FIELD CAMERAMEN



CAMERAMEN whose job it is to keep tab via film on guided missile and aircraft flight preparations at Chance Vought Aircraft, Inc., Dallas, Texas, employ a tiny transistorized radio receiver for intercom. Operated by two pencil flashlight batteries, radio is smaller than a pack of cigarettes. It is mounted on ear-protector headset such as supplied to men working around jet engine noise. Hearing aid earphone is mounted inside earpiece of set. Flexible cat-tail antenna extended overhead brings in radio signals. Receiver is tuned to primary frequency used for plane communications and missile launchings.



ACADEMY AWARD WINNING

PRINTER ROBOT

HIGHER SPEED . . .
The speed of the light selector cam which rotates the light shutter has been increased from 36 to 63 R. P. M.

STAINLESS STEEL CONTACTS . . .
The new stainless steel contacts insure a longer, trouble free life due to their self cleaning action

MOTORS OPERATED ONLY DURING PRINTING . . .
The servo roll drive motors are actuated only during actual film printing and are started and stopped by the tape reader information. This results in reduced wear on motors, brakes, and clinches and reduces maintenance costs

GREATER ACCURACY . . .
Sharper brake action increases the accuracy of the printer point selection

LONGER LIFE . . .
Smoother engagement of clinches in the servo units increase the life of the motor and the belt

NEW ELECTRONIC COMMAND UNIT . . .
This circuit is redesigned to avoid any wear and arcing of relay contacts and results in lower power transformer temperature

NEW SIGNAL LIGHT ARRANGEMENT . . .
The lamp in the electronic roll does not light up until the time relays have operated indicating that the roll is ready for printing.

IMPROVED SAFETY CIRCUIT . . .
Additional safety features have been incorporated to eliminate misfiring of thyratrons controlling the servo unit, thus assuring correct positioning of the light selector arm

QUICKLY ADJUSTABLE . . .
For added convenience the machine can be quickly adjusted to any of 21 or 31 positions as well as offering adjustable spacing

WRITE FOR INFORMATION REGARDING OUR NEW RENTAL PURCHASE PLAN

FOR LABORATORY EQUIPMENT WITH ADVANCED DESIGN

UNICORN ENGINEERING CORPORATION

KEEP UNICORN IN MIND

AUTOMATIC TAPE SPLICER

Unicorn's Robot Splicer is the ideal piece of equipment for use in splicing film in total darkness prior to its entry into the processing machine

Assures an extra strong splice which cannot come apart during the processing cycle;

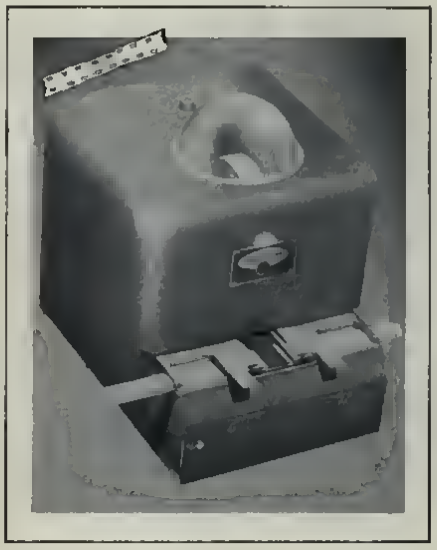
Eliminates all danger of nicks to processing rollers caused by staples, clips, or eyelets.

Pressure sensitive Mylar-base tape wraps completely around the cut edges of film resulting in a film saving butt splice. This guarantees minimum waste and safely ties down edges so that they cannot catch in the processing machine parts

THREE MODELS ARE CURRENTLY AVAILABLE:

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MODEL S-7

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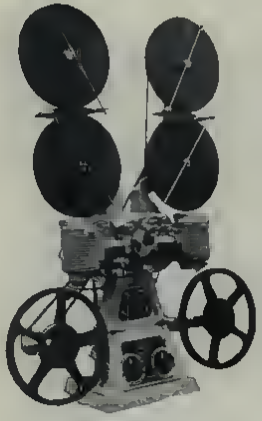
Complete with transistorized electronics, the remarkable S-7 introduces a new free wheeling magnetic clutch driven film sprocket. One man can operate many units. Thread over idler for magnetic sound, below idler for optical sound. Automatic turn-off, rewind, etc. Write for particulars



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departments. Very rarely are any radical changes suggested when a "cleanup test" is viewed by the director, and such changes as might result generally concern minor alterations in timing or camera moves. All of the factors of a scene have been pretty thoroughly combed-over by the time the animation reaches cleanup stage, and from there on in it's the home stretch without interruption, with the wind-up under the animation camera.

However, with the possibility of change always present in a creative product such as an animated cartoon, no one concerned with production completely uncrosses his fingers until the picture is actually in release in the theaters.

Next month we will take up the final phases of animated film production: inking, painting, photography and the re-recording of sound as applied to the familiar animated color cartoon or the more elaborate animated features such as Walt Disney's "Sleeping Beauty," mentioned earlier. ■

"VISUAL SQUEEZE" FOR COMMERCIALS

Continued from Page 119

commercials in the past ten years, but no technique has caught on so fast as this one. As this is being written, about 40 of these commercials will have been delivered to such diverse clients as Ford Motor Co. (J. Walter Thompson), Chemstrand Nylon (Doyle Dane Bernbach), Aero Shave (J. Walter Thompson), Instant Sanka Coffee (Young & Rubicam), Tek Hughes products (Young & Rubicam), and Esso (McCann-Erickson), the latter with a modified version.

Tom Whitesell, vice-president in charge of film production at Transfilm, said that a great deal more of the sponsor's message can be put into one of these commercials because there isn't any wasted motion in establishing scenes and in making transitions from scene to scene. He is quick to add that these are complex commercials to make and require a high degree of rapport between the ad agency and film producer.

"The elements involved in these commercials are so carefully integrated in the planning stage," said Whitesell, "any afterthought, once production gets underway, can be very costly."

First comes the sound track, music and voice, which guides the rest of the production. The music is original and is recorded before the voices are added. Instrumentation can vary. Some of the spots, like Aero Shave, used five pieces. Tek used 15 instruments. The music track is then played on tape and the voices are added. The copy is written in a scanning, poetic metre and can be sung, as it is in most cases, or recited, as in the case of Aero Shave. The number of voices used varies with each job.

Illustrated on page 118 are the key

Out Of The Book

THE REESTABLISHING SHOT

"THE FREQUENT USE of reestablishing shots is necessary to refresh the audience's memory of the scene . . . It is a continuity truism that an audience, always looking ahead to what is coming, rarely keeps in mind more than one scene prior to the one it is looking at. It must periodically be reminded of how a small scene fits into the larger scene that includes it.

Remember that the human eye unconsciously refuses to look at too many closeups in succession, and reorients itself every now and then by a quick look around. Let your camera do likewise for your audience by frequently reestablishing the scene, otherwise confusion may kill interest.

You reestablish, therefore, not only to tie sequences together, but also to keep your audience from getting lost."—*Arthur L. Gaskill and David A. Englander in "Pictorial Continuity." (Duell, Sloan & Pearce, Inc., New York, N. Y.)*

BALTAR

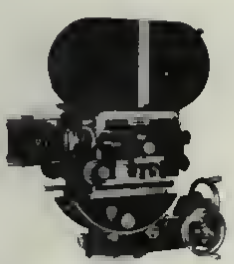
...professional standard for 35 mm and 16 mm cinematography



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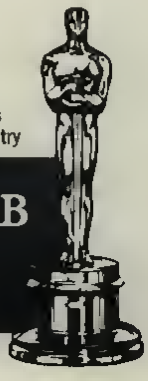
More professional footage is filmed with Baltar than with any other lens. It will pay you to keep this in mind on your next important assignment.

Order from your professional camera manufacturer, or WRITE to Bausch & Lomb Optical Co., 30038 Martin St., Rochester 2, N. Y.



STANDARD EQUIPMENT
on world-famous Mitchell 35mm and 16mm cameras for professional cinematography. "85% of the motion pictures shown in theatres throughout the world are filmed with a Mitchell"

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Honorary Award for Optical Service to the Industry



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photos which Transfilm's staff prepared for 1-minute commercials for Tek Hughes and Ford Motor Company for integration with television programs which both companies presently are sponsoring. The photos flash on the screen in quick succession, accurately timed to the audio accompaniment.

As the Tek illustrations appear, the voice of Darlene Zito says: "Lovely . . . at any hour. But tonight she's dressed to dazzle with the latest fashion for evening . . . The Late O'Clock Purse by TEK . . . TEK . . . Yours for only one dollar with any TEK toothbrush . . . comb . . . hair brush, nail or hand brush. The Late O'clock Purse in Lucite crystal. Black or mock tortoise, all with elegant chain handle. For each purse you order send one dollar plus label from *any* TEK product to . . . TEK, Box 596, Troy, New York. It's simple. TEK, Box 596, Troy, New York. Get your Late O'Clock Purse . . now. Hurry!"

The Ford illustrations dramatize one of the salient features of Ford cars—that Fords are "proportioned for people, proportioned for you!" Narrators Darlene Zito and Jack Searle give voice to the message in this one:

"Before you spend your dough on a car . . . here's something you should know. Try the back seat . . . Test the back seat . . . sit in the back seat . . . your passengers will. If the roof's too low and the floor's too high . . if the drive shaft tunnel bends an average guy . . . if it can't seat three. Oh my! That's not a Ford. 'Cause Ford gives you head room. Stretch out—you've got leg room. Getting in . . and . . . out . . . you have more room. Ford is proportioned for people; Ford is proportioned for you!"

Amplifying these thoughts visually are the series of stills showing a typical car buyer in appropriate poses as he tries a competitive car for size, finally finds comfort in the generously proportioned Ford.

When commercials like these are ready for illustration and recording on film, one of Transfilm's top still photographers listens to the sound track—already recorded—and studies the script and storyboard. He shoots anywhere from 150 to 500 still photographs, each one accentuating the copy and music. Although only 50 to 100 photos are finally used, the photographer must shoot in excess of this as the slightest facial or body movements make a big difference in the final film.

The next step takes place in the animation department. The photos and sound track are plotted on an animator's lead sheet which accounts for the 1,440 frames which make up a one-minute commercial film. This is the same procedure that is followed in the production of cartoon films. The effectiveness of the entire commercial is based upon the coordination of the rhythm of the changing pictures with the rhythm of the sound track. The animator's lead sheet is the guide for achieving this coordination. Next step is the plotting of the work on an exposure sheet which gives precise instructions to the animation camera operator as to what photos to use, what portion of the photos to expose, and where to zoom, pan, etc. When all of the still photos are recorded on motion picture film, a print is made and this is carefully matched to the sound track. It takes three to four weeks to complete a commercial in the "visual squeeze" technique.

In most of these commercials, the visual images come on the screen in a staccato-like effect, a "visual squeezing," as Bergmann calls it.

"The viewer," said Bergmann, "can grasp a great deal more from a commercial than what many might expect." He cited the U.S. Armed Forces training devices for aircraft and ship identification — tachistoscopes — which flash images for only 1/50th of a second. "These proved to be most effective and corroborate the great speed with which the eye and mind respond to stimuli. Of course, the pace in our commercials is considerably slower," Bergmann added.

The "newness" of this technique is only in the way ad agency creative personnel apply it. As with animation, critics place the importance on the idea, rather than the technique. The Aero Shave commercial is quite different from all the others as it tells a sequential story in a very humorous way. The Ford commercials employ some very clever photographic tricks so that despite the use of still pictures, there's a great deal of action in the

Continued on Page 130

CINEMATOGRAPHY IN ATOMIC RESEARCH



ARRIFLEX CAMERA and Pan Cinar zoom lens were used by cameraman Stanley J. Andrews, Jr., (foreground) to photograph scenes in the "iron room" of the Radiological Physics Division of the Argonne National Laboratory for its motion picture production, "Ionizing Radiation in Man." Picture is one of eight selected for presentation at the Second International Conference on Peaceful Uses of Atomic Energy at Geneva, Switzerland last September. All eight films are being released in English, French, Spanish, and Russian languages.


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the best in cinefilm
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model who shops around for a comfortable car.

While the technique goes back many years in the history of film production, one of the first to experiment with it for TV was James Manilla, producer at McCann-Erickson. He made a pilot film several years ago, but it was only experimental and never aired. However, this film was shown around a good deal and most every agency producer became familiar with it. About a year ago, Young & Rubicam made a spot in this style for Johnson and Johnson Band-Aid Sheer Strips. Tek-Hughes, a division of Johnson and Johnson, is now using three of them, all made by Transfilm (Transfilm did not make the Band-Aid spot.)

Last June, Doyle Dane Bernbach came up with one for Chemstrand nylon which Transfilm produced. It won a first prize at the recent Venice International Advertising Film Festival. Much publicity on this spot, before and after the award, revived interest in the technique, and the many possibilities it afforded. Complicated as they are to produce, the technique is extremely flexible and allows for hundreds of variations. Transfilm believes that the surface has only been tapped, and that practically every phase and skill in the graphic arts can be applied to this "visual squeeze" technique. ■

"THE HANGING TREE"

Continued from Page 113

so important to pictorial continuity. Many of the exteriors, also, are likewise enhanced because the potentials of the lenses he used were enabled to function at their fullest.

These advantages, of course, apply only where color negative is used, and where grain continues to be a problem. In black-and-white photography, the availability today of extremely fine-grain negatives obviates the necessity of having to take such measures as described above for color productions.

In discussing, with Technicolor Corporation's Giff Chamberlain, the processing phase of color negatives thus photographed, he explained that there are three ways of producing the 35mm release color prints: (1) by optical reduction from any of the enlarged-area color negatives direct to a 35mm, 4-perforation color positive; or, with proper lenses, either anamorphosed or spherical images may be extracted; (2) since it is not commercially practical to manufacture release prints optically, the alternative is to make a reduction internegative having the desired image placement from which contact prints may be obtained. However, in the latter method, a quality loss normally encountered in the manufacture of internegatives can be expected to exceed the gains which are inherent in the reduction. (3) the third system is unique to the Technicolor process, because the reduction is accomplished in the preparation of the matrix from which dye transfer prints are made. Dye transfer prints made by this method are superior in quality to those made from either of the alternative methods outlined under (1) and (2). There is the additional advantage that the original negative is used only to provide the several sets of matrices for the 300 to 400 prints usually necessary to satisfy domestic and foreign release markets. Thus, top-quality uniform prints are assured regardless of the number required.

With so many of his previous assignments shot in aspect ratios ranging from the standard Academy Aperture to CinemaScope, McCord says he had almost forgotten the many advantages inherent in the old full-frame aperture, which was the standard in the days of silent pictures.

"When we were planning the photography of 'The Hanging Tree'," he said. "I reasoned that we could shoot it with Mitchell BNC cameras and gain the advantages of reduction printing simply by enlarging the aperture plate in the cameras to produce a larger negative image."

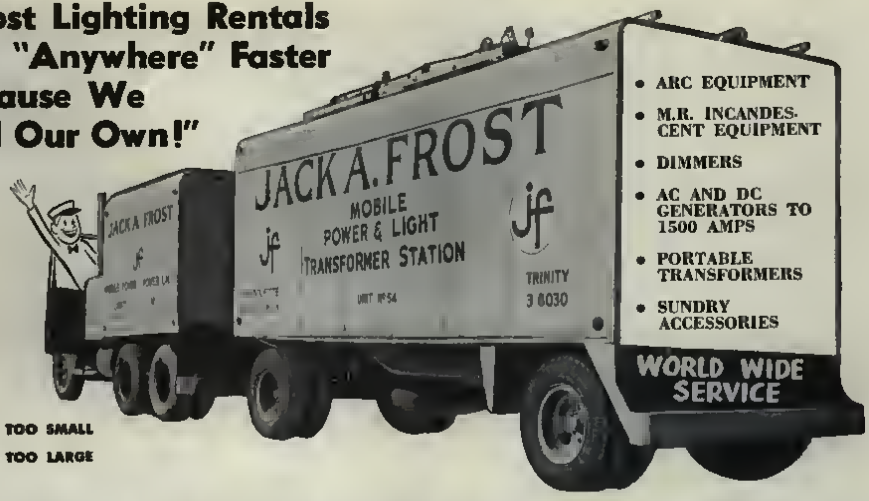
Enlarging the aperture plate, of course, is not a new idea. It had been done before and for various reasons. It was, for instance, the basis of the Superscope wide-screen process developed by the Tushinsky brothers at RKO in 1955. (See American Cinematographer for November, 1955). For the photography of "The Hanging Tree" it served still another purpose—and it is likely to be used for more and more color productions, where the prints are to be made by Technicolor.

ARTIFICIAL RAINMAKER FOR MOVIE SCENES



RAINMAKER—Ever wonder how rain is manufactured for motion picture scenes? This is one method devised by Warner Brothers studio technicians. It was first used for scenes for "The Spirit of St. Louis." Multiple lengths of hose, each of a different length and each with a sprinkler head on one end, are suspended over the exterior set, as shown here, to produce a reasonable facsimile of rain. The truly realistic effect, however, still depends upon the cameraman who must know how to light the falling rain to enhance the illusion. (Photo courtesy Warner Brothers Studio.)

"Frost Lighting Rentals Get "Anywhere" Faster Because We Roll Our Own!"

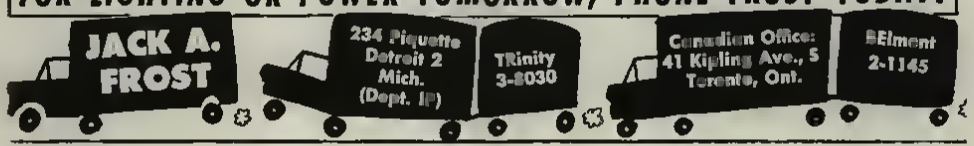


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MICROPHONE

Continued from Page 111

condenser-type microphones will permit the firing of a gun right at the microphone without damage to the diaphragm. This type of mike is a good choice to be carried around on location, working in factories or on highways—in any of the work locations where a microphone may be accidentally dropped or knocked over.

Without going into unnecessary technical details describing high impedance as against low impedance, we can go direct to the point—that high-impedance microphones are prone to trouble. Electrical influences in the neighborhood of the microphone are quite likely to be picked up and recorded. For this reason, the length of microphone cord practical to use is limited for the high-impedance mike.

Up to now we purposely omitted mentioning the crystal mike, and other high-impedance types. Generally speaking, they are used more in amateur



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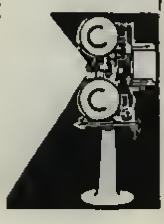
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work, in home tape recorders, and in some of the cheaper models of professional recorders. They are also used in recorder-projectors.

No thoroughly professional recording layout would use a high-impedance microphone. The nominal impedance for microphones in America today is designated as 50 ohms. There are some 250 ohm mikes, 500 ohm mikes and so forth but the microphone impedance most commonly used is 50 ohms. The ordinary crystal mike might be read as 100,000 ohms or even higher. There's a wide difference in the resistance characteristics of the microphone circuits, and—to the technical mind—that would explain the relationship between impedance and the problem of recording extraneous noise.

For the benefit of the many industrial, TV film, and in-plant 16mm film producers who are clients of The Calvin Company, Inc., Kansas City, Mo., Allen Jacobs, the company's Director of Sound Recording, has written a series of articles on sound recording for the company's monthly workshop publication for 16mm film producers. Purpose is to acquaint the small, independent film producer with the rudiments of and equipment for recording sound for his own 16mm productions.

Because American Cinematographer numbers many readers on this level of professional film production, and because its editors feel that Jacobs' articles can benefit many of these readers, we are reprinting the series with the permission of The Calvin Company.

Because of his extensive sound engineering background and his long experience in dealing with the sound problems of the many 16mm film producers who are Calvin clients, Allen Jacobs is eminently qualified to speak and write on his subject.

Article V in the series will appear in our March issue.—EDITOR

So, for normal usage in commercial recording arrangements, low impedance mikes are generally considered the best choice.

To sum up, choosing a microphone involves consideration of the following factors:

1. Non-directional feature—in order to shut out or minimize undesirable noise.
2. High output—achieved by a preamplifier in or near the microphone to provide immediate increase in volume before the signal travels through the mike cable.
3. Diaphragm—a type that will stand rough handling and not give trouble in the wind.
4. Frequency response—a smooth response curve that automatically eliminates roughness in recording.
5. Impedance — a low-impedance microphone preferred.

The problem is to get a desirable choice of each of the above features without running your microphone cost up too high.

In the next article we will discuss some of the auxiliary equipment required for magnetic sound recording ■

PHOTOGRAPHIC ASSIGNMENTS

Continued from Page 82

FOX WESTERN AVENUE

CHARLES BURKE, "Black Saddle"* Commercials* (Four Star Prods.)

PEVERELL MARLEY, ASC, Commercial* (Four Star Prods.)

GENERAL SERVICE

HAL MOHR, ASC, Commercials* (Filmways Prods.)

JAMES VAN TREES, ASC, "The George Burns Show"* (McCadden Prods.) with George Burns. Rod Amateau, director.

HARRY WILD, ASC, "The Bob Cummings Show"* (Laurmac Prods.) with Bob Cummings and Rosemary DeCamp. Bob Cummings, director.

NEAL BECKNER, "The Adventures of Ozzie & Harriet"* (Stage 5 Prods.) with the Nelsons. Ozzie Nelson, director.

ARCH DALZELL, "Flight"* (McCadden Prods.)

WALTER STRENGE, ASC, Commercial* (Filmways Prods.)

GOLDWYN STUDIOS

NORBERT BAODINE, ASC, "Loretta Young Show"* (Lewislor Prods.) with Loretta Young.

INDEPENDENT

MAURY GERTSMAN, ASC, "Invisible Invaders" (Premium Picts. for UA) with John Agar and Jean Byron. Edward Cahn, director.

PAUL BELSON, "Summer of the 17th Doll" (Hecht-Hill-Lancaster for UA; shooting in Australia) with Ernest Borgnine and Anne Baxter. Leslie Norman, director.

FELIPE SACOALAN, "The Scavengers" (Hy-Ford Prods. for Hal Roach; shooting in Hong Kong, Macao and Manila) with Vince Edwards and Carol Ohmart. John Cromwell, director.

RICHARD E. CUNHA, "Bloodlust" (Cinegraf Prods.) with Wilton Graff and June Kenny. Ralph Brooke, director.

CARL GUTHRIE, ASC, "The Road Racers" (American Int'l Picts.) with Sally Fraser and Mason Alan Dinehart. Arthur Swerdloff, director.

FRANK PLANER, ASC, "The Unforgiven" (Panavision & Eastman color; Hecht-Hill-Lancaster for UA, shooting in Mexico) with Burt Lancaster and Audrey Hepburn. John Huston, director.

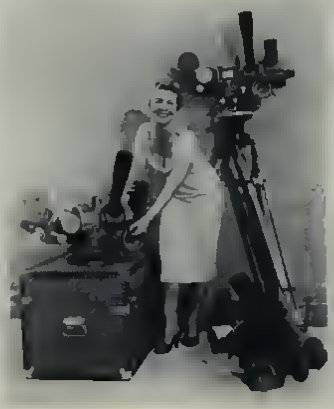
WILFRID CLINE, ASC, "Cast a Long Shadow" (Mirisch-Murphy for UA) with Audie Murphy and Bob Faulk. Thomas Carr, director.

FRED YOUNG, "Salomon and Sheba" (Technicolor; Edw. Small Prod. for UA; shooting in Spain) with Yul Brynner and Gina Lollobridida. King Vidor, director.

LEE GARMES, ASC, "The Big Fisherman" (Eastman color; R. V. Lee Prod. for Buena Vista) with Howard Keel and Susan Kohner. Frank Borzage, director.

DESMOND DICKINSON, "Horrors of the Black Museum" (C'Scope & Color; American Int'l Picts., shooting in England) with Michael

CAMERAS TO TRACK FAST-MOVING SPACE TRAVELERS



GLAMOUR NOTE is added by model Gladys Nelson to display of three high-precision data-recording motion picture cameras or cine-theodolites—a sort of movie-recording surveyor's level—which Gordon Enterprises, of North Hollywood, Calif., recently fabricated and delivered to the Royal Canadian Air Force.

On the 35mm film exposed by the cameras, an image is captured of the space object being photographed together with superimposed data of the split-second the picture was made and the exact angle and location at which the camera's huge telephoto lens was aimed. From analysis of this record physicists can figure data such as velocity, trajectory, track, etc.

Gough and June Cunningham. Arthur Crabtree, director.

WILLIAM CLOTHIER, "The Horse Soldiers" (Color; Mahin-Rackin-Mirisch for UA) with John Wayne and William Holden. John Ford, director.

WILLIAM DANIELS, ASC, "A Hole in the Head" (C'Scope and Color, Sincap Prod for UA) with Frank Sinatra and Eleanor Parker. Frank Capra, director.

RUSSELL HARLAN, ASC, "Day of the Outlaw" (Security Picts. for UA) with Robert Ryan and Venetia Stevenson. Andre de Toth, director.

TED PAHLE, ASC, "Ed Sullivan Show"* (shooting in Portugal and Ireland) with Maurice Chevalier. Robert Precht, director.

KEYWEST STUDIOS

WALTER STRENGE, ASC, Series of religious pictures (Family Films) William Claxton, director.

LINKLETTER PLAYHOUSE

ALAN STENSVOLD, ASC, "People Are Funny"* (John Guedel Prods.) with Art Linkletter. Irv Atkins, director.

McGOWAN STUDIOS

BRYDON BAKER, "Death Valley Days"* (McGowan Prods.)

RAY FOSTER, ASC, Commercials* (LaBrea Prods.)

METRO-GOLDWYN-MAYER

ROBERT SURTEES, ASC, "Ben Hur" (shooting in Rome) with Charlton Heston and Jack Hawkins. William Wyler, director.

ROBERT BURKS, ASC, "North by Northwest" with Cary Grant and Eva Marie Saint. Alfred Hitchcock, director.

ROBERT BRONNER, ASC, "Ask Any Girl" (Metrocolor, Euterpe Prod.) with David Niven and Shirley MacLaine. Charles Walters, director.

LESTER SHORR, ASC, "Col. Humphrey J. Flack"* (Jody Pan Prods.) with Alan Mowbray and Frank Jenks.

WILLIAM SPENCER, "The Thin Man"* with Peter Lawford and Phyllis Kirk.

DALE DEVERMAN, "One Step Beyond"*, John Newland, director; Commercials*

MOTION PICTURE CENTER

ROBERT DE GRASSE, ASC, "Danny Thomas Show"* (Desilu Prods.) with Danny Thomas. Sheldon Leonard, director; "Love and Marriage"* (Desilu Prods.) Bob Sweeney, director.

Continued on Page 135

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5 REMOTE CONTROL INLET (SWITCH OR TIMER)
6 STANDARD TRIPOD THREAD ON BOTTOM
7 CONNECTS WITH CAMERA BY PLASTIC TUBING

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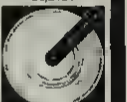
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PHOTOGRAPHIC ASSIGNMENTS

Continued from Page 133

LOTHROP WORTH, ASC, "The Real McCoy's"* (Brennan-Westgate Prods.) with Walter Brennan Hy Averback, director

SID HICKOX, ASC, "December Bride"* (Desilu Prods.) with Spring Byington and Francia Rafferty Frederick DeCordova, director.

PARAMOUNT

DANIEL FAPP, ASC, "The Five Pennies" (VVision & Technicolor, Dena Pictures) with Danny Kaye and Barbara Bel Geddes. Melville Shavelson, director

HASKELL BOGGS, "Don't Give up the Ship" (Hal B Wallis) with Jerry Lewis and Dina Merrill Norman Taurog, director

CHARLES LANG, JR., ASC, "One-Eyed Jacks" (VVision & Color, Pennebaker Prods.) with Marlon Brando and Karl Malden Marlon Brando, director.

LOYAL GRIGGS, ASC, "The Jayhawkers" (VistaVision & Technicolor) with Jeff Chandler and Fess Parker Melvin Frank, director

ROBERT BURKS, ASC, "But Not For Me" (VistaVision) with Clark Gable and Carroll Baker. Walter Lang, director

REPUBLIC STUDIOS

JOHN RUSSELL, ASC, WILLIAM SICKNER, ASC, "M Squad"* (Latimer Prods.) with Lee Marvin

ERNEST HALLER, ASC, "Alfred Hitchcock Presents"* (Revue Prods.) Paul Henried, director

WILLIAM SICKNER, ASC, JACK MACKENZIE, ASC, JOHN WARREN, ASC, "Mickey Spillane's Mike Hammer"* (Revue Prods.)

JACK MACKENZIE, ASC, "State Troopers"* (Revue Prods.) with Rod Cameron Earl Bellamy, director. "Cimarron City"* (Revue Prods.) with George Montgomery

JOHN RUSSELL, ASC, Schlitz-Lux Playhouse"* (Revue Prods.) Jules Bricken, director

BENJAMIN KLINE, ASC, "Wagon Train"* (Revue Prods.) James Nielson, director.

ELLIS THACKERY, ASC, "Restless Gun"* (Window Glen Prods.) with John Payne. Ed Ludwig, director, "Wells Fargo"* (Overland Prods.) with Dale Robertson Earl Bellamy, director.

WILLIAM SICKNER, ASC, "Bachelor Father"* (Bachelor Prods.) with John Forsythe

MACK STENGLER, ASC, "Leave it to Beaver"* (Gomalco Prods.) with Barbara Billingsley and Hugh Beaument Norman Tokar, director

LIONEL LINDON, ASC, JOHN RUSSELL, ASC, 'General Electric Theatre"* (Revue Prods.)

RAY RENNAHAN, ASC, "Buckskin"* (Revue Prods.)

WALTER STRENGE, ASC, Commercial* (Wilding Pictures.)

RKO GOWER

ROBERT PITTACK, ASC, "Ann Sothern Show"* (Desilu Prods.) with Ann Sothern.

GEORGE CLEMENS, ASC, "The Millionaire"* (Don Fedderson Prods.) James Kern, director.

WALTER STRENGE, ASC, Commercial* (Desilu Prods.)

PAUL IVANO, "The Texan"* (Desilu Prods.)

SKO PATHE

CHARLES STRAUMER, "U S Marshal"* (Desilu Prods.) with John Bromfield Harve Foster, director

LOTHROP WORTH, ASC, "The Real McCoy's"* (Brennan Westgate Prods.) with Walter Brennan. Hy Averback, director

WALTER STRENGE, ASC, Commercial* (Desilu Prods.)

HAL ROACH STUDIOS

EDWARD FITZGERALD, ASC, "The Gale Storm Show"* with Cole Storm and ZaSu Pitts. William Seiler, director

HOWARD SCHWARTZ "The Veil"* with Boris Karloff

TWENTIETH CENTURY-FOX

JOSEPH MACDONALD, ASC, "Warlock" (C'Scope & Color) with Richard Widmark and Henry Fonda. Edward Dmytryk, director.

WILLIAM MELLOR, ASC, "The Snow Birch" (C'Scope, DeLuxe color) with Susan Hayward and Stephen Boyd Henry Hathaway, director

KARL STRUSS, ASC, "The Sad Horse" (C'Scope & Color, Associated Producers) with David Ladd and Chill Wills James B. Clark, director.

MILTON KRASNER, ASC, "The Man who Understood Women" (C'Scope; DeLuxe color) with Leslie Caron and Henry Fonda Nunnelly Johnson, director

LEO TOVER, ASC, "Say One for Me" (C'Scope & Color) with Bing Crosby and Debbie Reynolds Frank Tashlin, director.

UNIVERSAL-INTERNATIONAL

MARK DAVIS, ASC, Commercial*

CLIFFORD STINE, ASC, Commercial*

JAMES DROUGHT, Commercials*

PHILIP LATHROP, "Peter Gunn"* (Sparta Prods.) with Craig Stevens, "Steve Canyon"*, (Pegasus Prods.) with Dean Fredericks.

ELLIS CARTER, ASC, "Affairs of a Vampire" with Eric Fleming and Kathleeen Crowley Edward Dein, director.

Continued on Page 136

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BULLETIN BOARD

Continued from Page 98

George Folsey, ASC, "Imitation General."

Charles Lang, ASC, "Separate Tables"

Charles Lawton, ASC, "The Last Hurrah."

Samuel Leavitt, ASC, "The Defiant Ones"

Lionel Lindon, ASC, "I Want To Live!"

Joseph MacDonald, ASC, "The Young Lions."

Joseph MacDonald, ASC, "Ten North Frederick."

Walter Strenge, ASC, "Cry Terror."

This year, two directors of photography each have two films on the candidate list. They are Charles Lawton, with one color production ("Cowboy") and one black-and-white ("The Last Hurrah"), and Joseph MacDonald whose two candidates are in the black-and-white category ("The Young Lions" and "Ten North Frederick").

Results of the nominating balloting will appear in this column next month.

• • •

Emery Huse, an Associate Member of the ASC, whose name is familiar to readers of *American Cinematographer* as Technical editor of this publication, celebrated his 40th year of service with Eastman Kodak Company on January 22nd. Huse began his association with the company in Rochester where he remained for almost ten years before moving to Hollywood. He is Manager of the West Coast Division of Eastman Kodak Company's Motion Picture Film Department. ■

INDUSTRY NEWS

Continued from Page 75

Europe, which gave birth to the first practical anamorphic system of photography and projection, continues to explore further the possibilities of super-widescreen movies. Newest development is that of Adalbert Baltes, West German documentary film producer, which he calls "Cinetarium." Baltes' Cinetarium theatre is similar to a planetarium in design—circular, with dome-shaped walls forming the screen, and with the film projected around the audience onto the overhead dome. Spectators view the pictures while seated in swivel chairs, are virtually "in the center of the picture."

Pictures for Cinetarium are photographed using the principle of aerial photography. A precision-silvered ball is suspended above the scene to be photographed, and the cameraman photographs vertically beneath it, capturing the full scope of the scene reflected in the ball.

In exhibition, the pictures are projected from center of the theatre floor onto a silver-surfaced half-sphere screen which in turn reflects the image against the theatre's dome-shaped screen.

A special camera using 55mm negative is used for the photography.

• • •

A field survey recently conducted by the Motion Picture Research Council, Hollywood, among the nation's first- and second-run theatres reveals that 74% of the 700 theatres surveyed exhibited films under less than optimum focus conditions, according to the MPRC study. In 63% of the cases studied, the Council's field representatives aided in on-the-spot corrections of the faulty conditions. Recommendations were also made in a majority of the-atres for correction of undesirable screen brightness levels, to use new lenses of a different focal length, and to use improved masking devices. Screen brightness was found a major drive-in problem.

PHOTOGRAPHIC ASSIGNMENTS

Continued from Page 135

ARTHUR FEINDEL, ASC, Commercials*

ARTHUR ARLING, ASC, Commercials*

WARNER BROS.

JOSEPH BIROC, ASC, "The FBI Story" (Technicolor, shooting in N.Y.) with James Stewart and Vera Miles. Mervyn LeRoy, director.

HARRY STRADLING, ASC, "The Philadelphian" with Paul Newman and Barbara Rush. Vincent Sherman, director.

HAROLD STINE, ASC, PERRY FINNERMAN, WESLEY ANDERSON, "Maverick"* with Jack Kelley.

RALPH WOOLSEY, ASC, HAROLD STINE, ASC, WESLEY ANDERSON, WILLIAM MARGULIES, "77 Sunset Strip"* with Efrem Zimbalist, Jr.

EDWIN DUPAR, ASC, RALPH WOOLSEY, ASC, "Lawman"* with John Russell.

CARL BERGER, ASC, RALPH WOOLSEY, ASC, "Cheyenne"* with Ty Hardin.

MARK DAVIS, ASC Commercials*

PERRY FINNERMAN, "Sugarfoot"* with Will Hutchins; "Doc Halliday"* (pilot) with Adam West. Leslie Martinson, director.

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